

NOVEMBER 1917 ~ Nº 143

Monthly

A Reference for Buyers

HITCHCOCK'S  
**MACHINE  
TOOL LIST**

Distributed Free to Machine Tool  
Users Everywhere in the United States and to  
Dealers in American Machinery Abroad

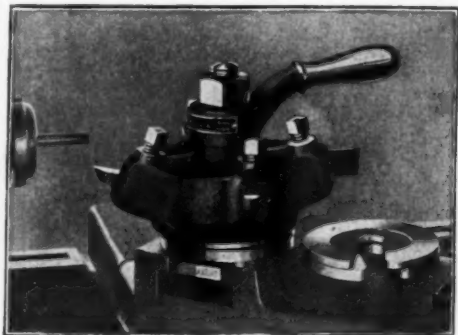
Published by  
**A-H-HITCHCOCK**  
1220-1235 Caxton Building  
Chicago



## ON or OFF in 5 Seconds

That is only one of several  
special advantages found in

## McCrosky Turret Tool Holders



Attached directly to compound rest.  
Take ordinary Tool Holder bits.  
Quick rocker adjustment for height of tool.  
Indexing feature unequaled for accuracy  
and simplicity.  
Other styles for all classes of work.

*Write for Turret Bulletin*

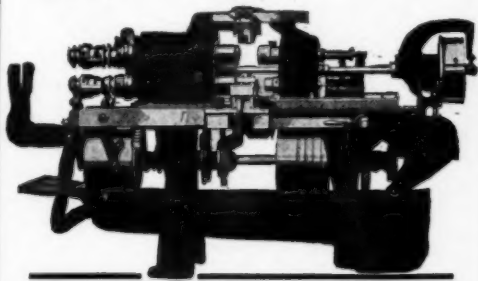
**The McCrosky Reamer Co.**  
Meadville, Pa., U. S. A.



# The Constant Test of Acme Multiple Spindle Automatics

The use of hundreds of them in our own product department is one of the reasons for the superior efficiency of Acme machines when it comes to **accuracy** and **output**.

It has paid us to "practice what we preach,"—it will pay you to investigate.



## "THE ACME WAY"

*Anything up to 3¼-inch Diameter*

*Ask for Acme Method Book "C."*

## THE NATIONAL ACME COMPANY

GENERAL OFFICES  
CLEVELAND

Windsor, Vermont

CANADIAN SCREW PLANT  
MONTREAL, P. Q.

### Branch Offices:

NEW YORK BOSTON CHICAGO DETROIT ATLANTA SAN FRANCISCO  
WAREHOUSES—NEW YORK, CHICAGO With FOREIGN REPRESENTATIVES

*Makers of Gridley Single and Multiple Spindle Automatics at Windsor, Vt., and Acme Automatics, Threading Dies and Screw Machine Products at Cleveland, Ohio*



Only Tap Wrench made that can be used in corners.  
It is sturdy, it is long lasting, efficient.



**PRICES:**

No. 1,	Length over all	3",	Cap:	$\frac{1}{8}$ to $\frac{3}{8}$	\$2.00
No. 2,	"	"	"	3 $\frac{3}{8}$ ",	" $\frac{1}{8}$ to $\frac{1}{2}$ 2.00
No. 3,	"	"	"	5 $\frac{3}{8}$ ",	" $\frac{3}{8}$ to $\frac{7}{8}$ 2.50

**GUARANTEED.**

Price delivered Parcel Post, United States.

Let us have your orders.

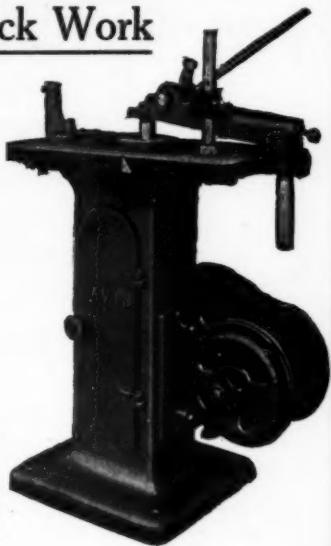
**Alert Tool Company**

237 North 6th St.,

Philadelphia, Pa.



## Modern Methods for Quick Work

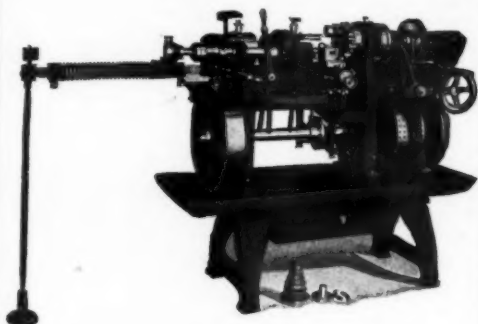


### **A DAVIS KEYSEATER**

Motor driven,  
will save you  
valuable space  
as well as in-  
crease your pro-  
duction. It is  
an investment  
you can't afford  
to overlook.

*Write for Circular*

**DAVIS MACHINE TOOL CO., Inc.**  
**ROCHESTER, N. Y., U. S. A.**



## Chicago Automatics

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No. 1      $\frac{3}{4}$  in. Capacity

No. 2      $1\frac{1}{4}$  in. Capacity

No. 4     2 in. Capacity

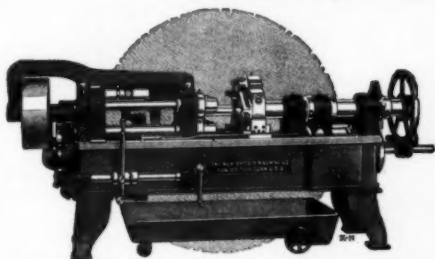
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For Sale By The  
**John Macnab Machinery Company**  
90 West St., New York City

# Labor Shortage

Need Have No Terrors On Your  
**Chucking Work**



## The "New Britain" Automatic Solves the Problem

Not only is it entirely automatic in operation, but—  
All operations are performed at the same time, and—  
You can load and unload it without interrupting the work.

This remarkable combination of efficiency enables one operator on our Single-Head Machine, illustrated above, to turn out as much work in the machining of one end of castings and forgings and in second-operation screw machine work, as from *three to five men* could do in any other way.

Our Double-Head Automatic, which machines both ends at once, further reduces the amount of labor required, while decreasing costs and multiplying production many fold.

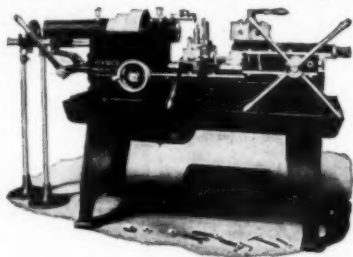
*Glad to submit guaranteed production estimate*



The  
**New Britain Machine  
Company**  
New Britain, Conn., U. S. A.



## Turns Bar Stock Rapidly



Especially adapted to *rapid work* in turning bar stock requiring one or more operations. Accurate, massive, powerful—countershaft pulls 15 h. p., while others slip under pull of 5 to 10 h. p. Bearings of best white metal. Write us.

**Pierce Machine Tool Company**

617 W. Jackson Blvd., Chicago, Ill.

## Sidney 15", 17" and 19" Lathes

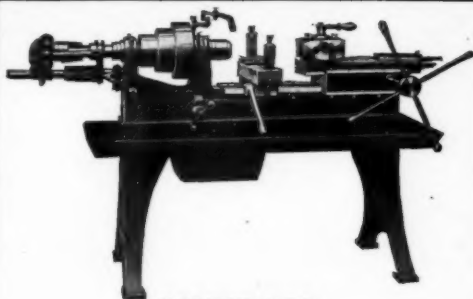
**Sturdy—Convenient—Accurate**



**19"x12' D. B. G., with Leg Center Support**

Furnished with single or double back gear, plain or quick change gear, and with any length bed from 6 ft. up. They are unexcelled in their combination of capacity, accuracy and price. Shall we send the complete information?—and where?

**THE SIDNEY TOOL CO., SIDNEY, OHIO**



**MODEL "D"**

## **Turret Lathes and Screw Machines**

**Now Ready for Delivery**

**Designed for Rapid Manufacturing of  
Parts Requiring Several Operations**

**MADE IN FOUR SIZES:**

- No. 2 {  $1\frac{1}{16}$ " Wire Feed Capacity, Plain Head  
          {  $1\frac{3}{32}$ " Hole Through Spindle.
- No. 3 {  $1\frac{5}{16}$ " Wire Feed Capacity, Plain Head  
          {  $1\frac{1}{8}$ " Hole Through Spindle.
- No. 4 {  $1\frac{7}{8}$ " Wire Feed Capacity, Geared Head  
          {  $2\frac{1}{32}$ " Hole Through Spindle.
- No. 5 {  $1\frac{7}{8}$ " Wire Feed Capacity, Geared Head  
          {  $2\frac{9}{32}$ " Hole Through Spindle.

**With or Without Power Feed to Turret Slide.  
Mechanically Perfect and Fully Guaranteed.**

**Manufactured By**

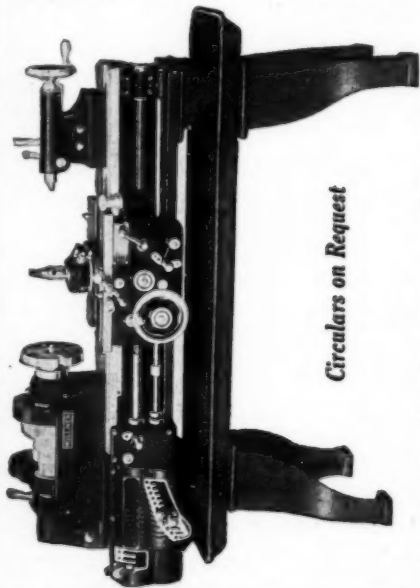
**Smurr & Kamen Company**

**313 N. Whipple St., Chicago, Ill.**

# Guaranteed Accuracy!

Mulliner Tool Room Lathes are guaranteed to bore and turn true to within .001" when properly set up.

Every Mulliner Lathe is tested to a standard which is way above ordinary requirements. Only the finest materials are used in construction.



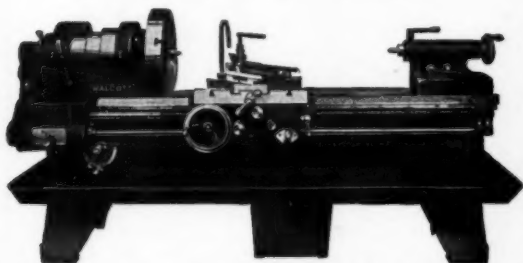
*Circulars on Request*

MULLINER-ENLUND TOOL CO., Inc., Syracuse, N. Y.

14, 16, 18, 20, 26 and 28 Inch

# Walcott Lathes

For Tool Room and Factory



**Walcott 20" Lathe with Quick Change Gear Box, 3-Step Cone and Double Back Gear, Oil Pan and Pump**

Walcott Lathes are powerful, convenient, safe, and the very embodiment of accuracy.

They also contain many excellent features that are not found in other high-grade lathes.

Especial attention has been given to those parts which usually show the first wear in a lathe, with the result that we believe we have increased the wearing qualities of Walcotts over any other lathes made.

We furnish oil pan and pump equipment with all sizes; square tool post on saddle and hexagon tool post on saddle for all sizes; hand feed turret on bed of 14 and 16 inch lathes, and power feed on bed of the larger sizes.

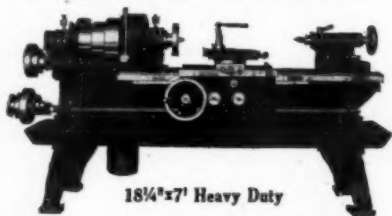
*We invite your most careful investigation.  
What size do you need now? Let's get together.*

## Walcott Lathe Co.

Jackson, Michigan

# Fulton Manufacturing Lathe

A High-Grade Tool at a Lower Price



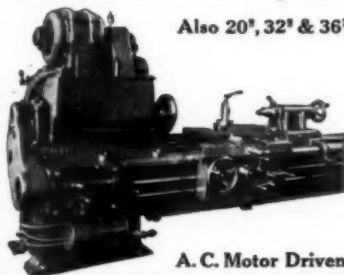
18 $\frac{1}{4}$ "x7' Heavy Duty

You are invited to investigate this heavy duty tool for plain turning, boring and facing, which comprises 75% of all lathe work. It is a high-grade machine, without all the expensive attachments, saving you \$150 to \$200 in price. *Write for full details.*

**Fulton Machine Tool Co.,** 1438 Bryan Pl., CHICAGO, ILL.

# Wickes 26" Heavy Duty

Also 20", 32" & 36"



A. C. Motor Driven

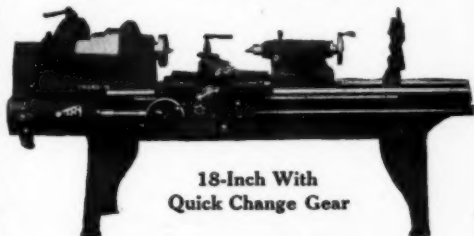
Here is a powerful lathe, built for large production and the severest service. The complete specifications will prove interesting to the practical man who appreciates high-grade tools.

**WICKES BROTHERS, Saginaw, Mich.**



# The Heavy Duty "Chard"

A Lathe of Super Quality



18-Inch With  
Quick Change Gear

16", 18", 20", 24" and 28" semi and quick change,  
with 4-step back gear and 3-step double back gear.

"A lathe of super quality" is a strong claim. But the "Chard" is a strong lathe, both in inherent strength and power and in the hundred and one details which make the complete tool either a faithful servant or a slacker. The "know how" of 35 years' experience in building high grade lathes is seen in every detail of the "Chard."

*May we have the opportunity to back it up?*

## Chard Lathe Company

New Castle, Ind.

### DOMESTIC DISTRIBUTORS

THE F. O. STALLMAN SUPPLY CO., San Francisco, Cal.

VONNEGUT MACHINERY CO., Indianapolis, Ind.

ENGLISH & MILLER MACHINERY CO., Detroit, Mich.

OGDEN R. ADAMS, Rochester, N. Y.

HILL, CLARKE & CO., Chicago, Ill.

THE W. M. PATTISON SUPPLY CO., Cleveland, Ohio.

J. S. MILLER MACHINERY CO., Pittsburgh, Pa.

MONARCH MACHINERY CO., Philadelphia, Pa.

PATTERSON TOOL & SUPPLY CO., Dayton, Ohio.

# Monarch Lathes

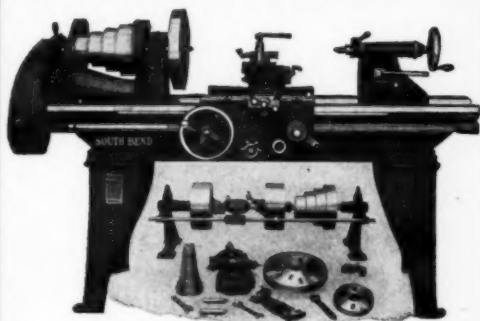
give universal satisfaction to the user. They have been doing this for years, and this accounts for the ever increasing demand for **Monarch Lathes.** Built in four sizes and in all styles and with any attachments desired.

*Sold by a leading Machinery Dealer  
in every machinery center.*



## The Monarch Machine Tool Co., Sidney, Ohio

# South Bend Lathe



16 in. x 6 ft. Screw Cutting Engine Lathe

South Bend Lathes have been on the market eleven years. Dealers in every large city.

Swing Over Bed, Inches	Length of Bed, Feet	Dist. Bw. Centers, Inches	Hole Thru Spindle, Inches	Approx. Weight on Skids	Code	Price
13 $\frac{1}{4}$	5	32	3	1,000	Hasen	\$272
15 $\frac{1}{4}$	6	40	1 $\frac{1}{2}$	1,425	Jadin	352
16 $\frac{1}{4}$	6	36	1 $\frac{1}{2}$	1,700	Juddo	432
18 $\frac{1}{4}$	8	57	1 $\frac{1}{2}$	1,950	Kell	566
21 $\frac{1}{4}$	10	75	1 $\frac{1}{2}$	3,300	Penti	841
24 $\frac{1}{4}$	12	95	1 $\frac{1}{2}$	4,420	Polly	1,218

Made with straight or gap bed. Price includes all the equipment shown in illustration.

## GUARANTEE

Write your own guarantee—We'll abide by it

*Send for free Catalog illustrating and describing entire line.*

## South Bend Lathe Works

Established 1906 South Bend, Ind.

East End

## **"Filsmith," a Powerful 14-Inch Lathe**

**Also Made With 16-Inch Swing**



**3-Step Cone  
Double Back Gears  
Strong for Its Weight**

Equipped also, when desired, with quick-change gear box and 12-speed ball-bearing geared head. All our lathes can be furnished with gap bed. *Write for specifications.*

**PHILIP SMITH MFG. CO., SIDNEY, O.**

## **20" Atlas High Duty Lathe**



**Quick Change, Double Back Geared  
Made with 8, 10 and 12 ft. Beds**

Like Atlas of old, the more severely it is tried the greater seems to be its power and strength. It takes heavy cuts with ease and accuracy, and is especially designed for long wear.

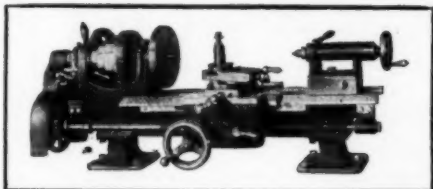
*How shall we address the description?*

**The Taylor Machine Co., Cleveland, Ohio**

# **"Dalton Six"**

**Actual Swing 7¼ in.**

**The Small Lathe for a Big Job**



"DALTON SIX" can be furnished with 30-in. or 36-in. bed, with either two-step or three-step cone pulley.

The Strength and Power of this Lathe is a multiple of its size.

Furnished for either English or Metric Thread cutting.

No manufacturer can afford to be without a "DALTON SIX."

*Send for Bulletin which tells about this lathe.*

**Dalton Manufacturing Corp.**

*Successors to*

**Dalton Machine Company, Inc.**

**1911-15 Park Ave.,**

**New York, U. S. A.**

# Speed With Accuracy



Is demanded of lathe work today.

## The Universal Turret Toolpost

Enables you to meet the demand efficiently and profitably. It will speed up your production and cut down your costs. Tools furnished complete.

*Prompt delivery—Write for particulars*

## Magna Machine Company

Suite 481, 50 Church St., New York

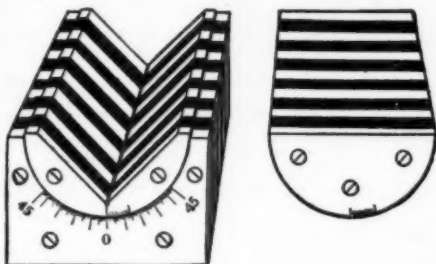
Also Builders of High Grade Special Machinery, Jigs, Tools, Gauges and Fixtures

**Expert Pattern Makers**

# How Efficient Is Your Magnetic Chuck?

## Buy A Set Of RADNETICS

—you'll find them the cheapest investment you ever made—and increase the chuck's field of usefulness infinitely.



This is the new

### Radnetic Protractor Block

which permits of instantaneous set-ups for grinding at any angle. No extra current required. 85% of the holding power retained.

*Write for descriptive Booklet*

**LAWSON & COMPANY, Inc.**

**416 West 33rd Street**

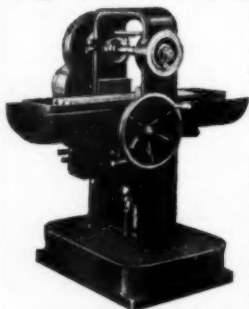
(Note new address)

**Sole Distributors**

**KAR ENGINEERING CO., Manufacturer & Patentee**

**NEW YORK CITY**

## Rigid — Powerful — Accurate



The Briggs high duty machine, while designed principally

### For Form and Gang Milling

of steel parts for automobiles, guns, etc., is also ideal for general use in the tool room and machine shop.

The solid, sturdy build enables it to take the full power of a 3½-inch double belt without any chatter.

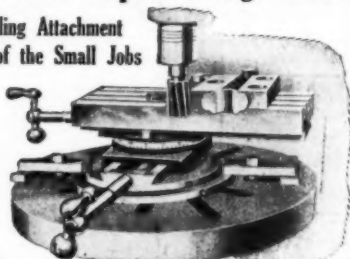
*Write us for full details of this cost reducer*

**GOOLEY & EDLUND, Inc., Cortland, N. Y.**

## Relieves and Replaces Big Millers

**Davis Milling Attachment  
Does 90% of the Small Jobs**

**Converts  
any Drill  
Press from  
14 to 42-in.  
swing in  
2 Minutes**



Relieves your large millers, comes in handy spotting castings, milling ends of bosses, etc., and does 90% of the lighter jobs as well as a \$1,000 machine; cuts keyseats perfectly. We also have low factory prices on our cylinder reamer for reboring the Ford car, and on our reliable air compressor. Write for details.

**Hinckley Machine Works, HINCKLEY, ILL.**



# Universal Angle Plate

A Handy Device for Accurate Milling,  
Boring, Grinding, Etc., at Any Angle



Made in sizes 4"x6", 6"x8", 8"x10" and 12"x18"

No tool-room foreman will ever be without this practical Universal Angle Plate after it is once used in his department, for it insures such accurate work on angular machining, it is so easily set to any desired angle without disturbing the work bolted to it, and it saves so much time, that all makeshift devices are crude, awkward and wasteful in comparison.

It swivels on the graduated base through a complete circle and tilts to 90 degrees. With the Vernier attachment extreme accuracy is secured, to one-twelfth of one degree, for the finest work. The addition of centers to the platen permits the grinding of formed cutters.

*Write for description and the moderate price*

**Boston Scale & Machine Co.**  
381-389 Congress St., Boston, Mass.

## This Bench Miller

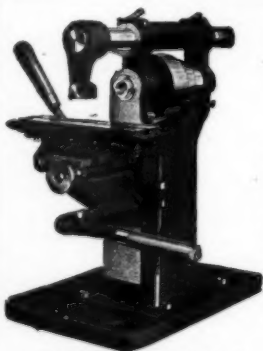


Is well designed and well built and is a machine that will give you good and permanent service. Can furnish floor column if required.

*Send for circular*

**The Carter & Hakes Machine Co.**  
West Winsted, Conn., U. S. A.

AGENTS—for New England and New York, Hill, Clarke & Co.  
WESTERN AGENTS—Marshall & Huschart Machinery Co.,  
Chicago, St. Louis, Indianapolis.



## Burke's No. 3 Bench Millers

**Are Seasoned Tools**

Our system of tests insures accuracy, and our methods of construction make it permanent. Frames and parts are carried 6 to 8 months, after work begins on them, before the completed tools receive our final O. K., and all parts are finished and fitted with exceptional care.

Longitudinal feed, 6 in.;  
traverse feed,  $3\frac{1}{2}$  in.; vertical  
motion of knee, 8 in.; table  
surface,  $3\frac{1}{2}$  x 12 inch.

*Write for Catalog, which also shows larger and smaller sizes.*

**The Burke Machine Tool Co.**  
Conneaut, Ohio

Any Old Motor  
Is Not Good  
Enough  
for

*“Van Dorn”*

Portable  
Electric  
**DRILLS and GRINDERS**

These tools are used under heavy duty conditions—are subject to sudden strains—

The average motor is not good enough—not reliable enough for “Van Dorn” Tools—

That’s why the Motors for “Van Dorn” Drills and Grinders are designed and built in the Van Dorn shops.

These motors have the power, the refinements and the re-enforcements necessary to give steady, continuous, reliable service, and they’re backed up by perfected mechanical construction throughout.

“Van Dorn” Special Motors and “Van Dorn” Specialized Tools are giving satisfactory service to thousands of users.

There’s a “Van Dorn” Drill or Grinder suited to your service. Write Dept. H giving full particulars.

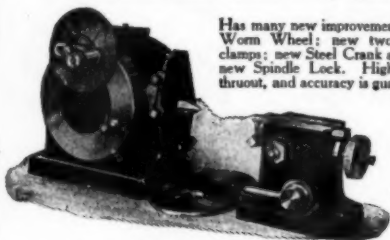
**The Van Dorn  
Electric Tool Co.  
Cleveland, Ohio, U.S.A.**

**Sales Offices:  
In All Principal Cities**



## Second to NONE in Accuracy

10" Universal Index Centers is My Specialty



Has many new improvements; over 5" Worm Wheel; new two-side head clamps; new Steel Crank and Sector; new Spindle Lock. Highest quality thruout, and accuracy is guaranteed.

**Get the Original—Beware of Imitators**

*Sold by all dealers. Write today for particulars.*

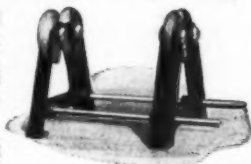
**Fred. C. Dickow, 35 So. Desplaines St., Chicago, Ill.**

## Balancing Ways

**That Require No Adjusting**

**The Anderson Improved Are Always Ready**

Rotation discs run on ball bearings of special design, and are extremely sensitive. They are made of chilled iron ground true on face, and perfectly balanced.



The Anderson Balancing Ways are designed for the quick and accurate balancing of cutter heads, crank shafts, aero-plane motors, propellers, polishing wheels, cones, pulleys, armatures, turbine rotors, etc. Several sizes to meet all requirements.

**Anderson Bros. Mfg. Co.**

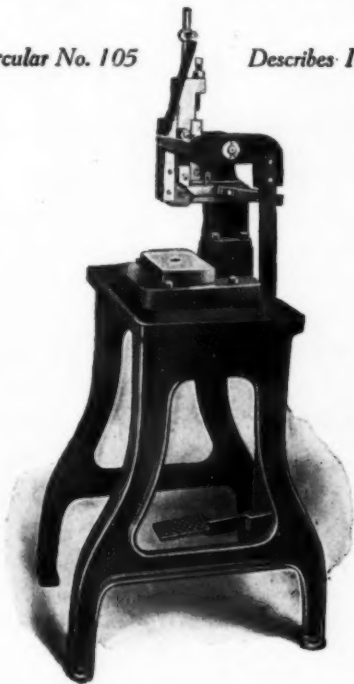
**115 Morgan St., Rockford, Ill.**

# Spring Foot Press No. 105

Uniformity of Blow    Vibrationless    Non-Fatiguing

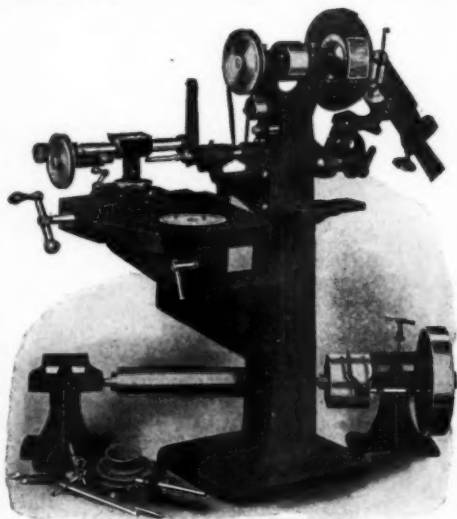
*Circular No. 105*

*Describes It*



**The Taylor & Fenn Company**  
Hartford, Conn.

**W. & M. Style BX**  
**Cutter, Reamer and Drill Grinder**



**CAPACITY:**

Face and Side Milling Cutters,.....	up to 12" Diam.
Angle and Plain Milling Cutters,.....	up to 8" Diam.
Gear Cutters and Hobbs,.....	up to 5½" Diam.
Reamers (Straight or Taper),.....	up to 17" Diam.
with Flutes not over 11½ in.	
Centers Swing Work, 7¼x17" — 11½" Movement.	

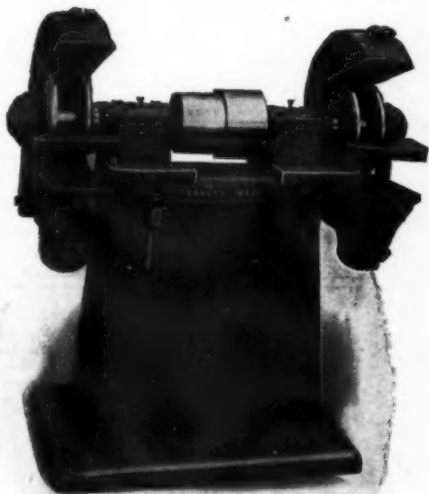
*Full Particulars on Request*

**Wilmarth & Morman Co.**

Makers of Drill—Surface—Universal Grinders

2185 Monroe Ave., N. W.    Grand Rapids, Mich., U. S. A.

# **Grind it** *on a* **"Blount"**



**No. 6½**

Our eight sizes meet all requirements of general grinding work. The large bearings insure accurate work under continuous heavy load.

**J. G. BLOUNT CO., Everett, Mass.**

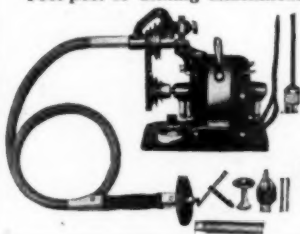
## Strand Flexible Shaft Portable Grinder

Made in four sizes: 1-10,  $\frac{1}{4}$ ,  $\frac{1}{2}$ , 1 H. P.

Adaptable for heavy or light grinding.

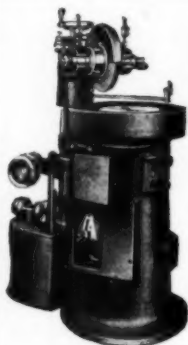
A universal portable flexible tool for every shop.

Tool post or drilling attachment and extra ball-bearing handle furnished also.



Write  
for  
catalog  
today

**R. G. Haskins,**  
547 Washington Blvd.  
Chicago, Ill.



## 12-Inch Bristol Precision Rotary Surface Grinder

No greater accuracy can be secured in the grinding of flat, convex or concave surfaces than is insured by the use of this simple, durable, convenient machine.

Write for specifications

**The C. G. Garrigus Machine Company**  
Bristol, Conn., U. S. A.



# Simple, Convenient Attachments

Are provided with the

*Greenfield*

Trade Mark Reg. U. S. Pat. Office

## Universal Grinder



Each Attachment is designed to serve a single purpose. This means that they are simple and without complicated adjustments to make them serve different purposes.

This makes it easy to change from one job to another and will save a lot of time. We have attachments for all kinds of tool sharpening and tool room grinding.

*You had better get our literature*

**Greenfield Machine Company**  
Greenfield, Mass., U. S. A.

**YOU Want Tool Holders that have MADE GOOD**

**Armstrong Tool Holders**

*Were Awarded The*

**Grand Prize**

**The Highest Possible Award at the Panama-Pacific  
International Exposition—1915**

*They Always Make Good*



**They Are Used in Most of the Big Machine Shops of the World**

*Send for Catalog*

**Armstrong Bros. Tool Co.**

*"The Tool Holder People"*

**308 N. Francisco Ave., Chicago, U. S. A.**



## **Steel Handles**



**For Power Tools, etc.  
We can save you money.**

*The Price*, on account of quantity production, is below the manufacturing cost of cast iron or forged handles.

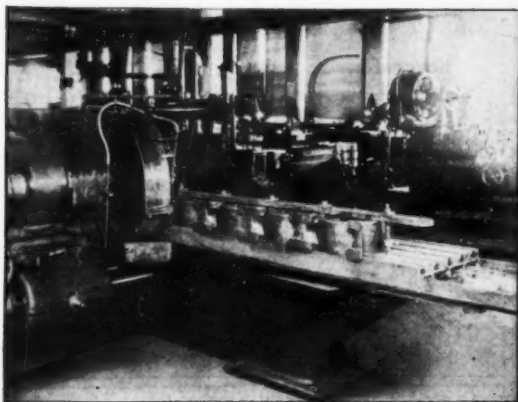
*In Quality* there is no comparison. They are accurate, highly finished, and ready to attach. Let us show you.

*Write for Catalog of Standard Handles, prices and discount*

**The Cincinnati Ball Crank Co.  
Oakley, Cincinnati, Ohio**



# 4 Times The Production



The motor feet shown above are in the shop of one of the country's largest electric motor manufacturers. They used to be milled at the rate of one in fifteen minutes. Now they are ground on the **DIAMOND HEAVY FACE GRINDER** at the rate of four in fifteen minutes.

Production has been quadrupled and the cost for grinding wheels is much less than for milling cutters and their upkeep.

Also note the simple fixture used for holding four motor frames at a time. The problems of thrust are simple in grinding.

*The Diamond Face Grinder circular H-3 will be sent on request. Other bulletins gladly sent if desired.*



*We also manufacture Floor Grinding and Polishing Machines, Wet Tool Grinders, Disc Grinders, and Surface Grinders.*

**DIAMOND MACHINE CO., PROVIDENCE, R.I.**

# Over 400 Motors In Stock

Largest Stock New General Electric  
Motors in Middle West

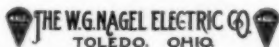
**Sizes, 1 h. p. to 150 h. p.**

ALTERNATING CURRENT—25 and 60 Cycle,  
220 to 440 Volts.

DIRECT CURRENT—115, 230, 550 Volts.

## Wire Inquiries

*Write for Nagel Motor List No. 23—Just Out*



Did you ever ask us to make  
those screw machine collets,  
with regular or irregular holes?

We are prepared to make good  
deliveries.

Why not try us next time?

Quantities never too small or  
too large to interest us.

**Hardinge Brothers, Inc.**  
Chicago, Ill.

# When You Buy—Ask Questions

## Ask Yourself—

If \$100 to \$500 extra for another cutter grinder is a wise investment by comparison with this one.

If you now have, or are likely to ever have a job this machine won't handle.

## Ask the Maker—

If the spindles are made of crucible steel.

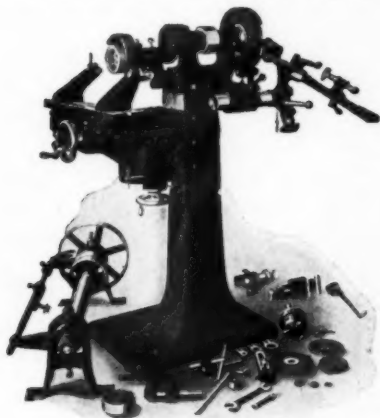
If all the spindle bearings are bronze.

If both cross and vertical feeds have dials reading in thousandths; what the size and kind of thread is and if they run in bronze nuts.

What is the size of the bearings.

What is the size of the ways.

**The More Questions You Ask  
The Better for Both You and Us**



*Get the circular today*

**Grand Rapids Grinding Machine Co.**

17 Ottawa Ave., N. W.

**Grand Rapids, Michigan, U. S. A.**

# *Thor* Universal Electric Drills

Licensed Under Burke Universal Motor Patent

Indispensable for all kinds of drilling, reaming and wood boring in the building of automobiles, steel and wood cars, boilers, auto bodies, and in railroad and structural shops, ship and dry dock work and machinery repairs. Can be operated on alternating or direct current, 110 to 250 volts. Furnished with cord and suitable feed attachment ready for immediate use. Attach to any lamp socket.



000	Drilling Capacity	1-4"
00	"	" 5-16"
0	"	" 3-8"
01	"	" 1-2"
1	"	" 9-16"

No. 6 Electric Grinder.

*Shipped On Trial*

**Independent Pneumatic  
Tool Company**

Chicago    New York    Pittsburgh    Detroit  
San Francisco    Birmingham    Montreal

# A Practical Pipe Bender

For 2-in. Pipe and Under



This is a hand-operated machine, adapted to the bending of almost any kind of work within its capacity. It is powerfully geared, and little effort is required to bend 2-inch pipe.

It is extensively used in railway shops, ship yards, car building plants, and wherever there is need of a convenient device of this kind. The adjustable stand permits its use between decks on shipboard.

A simple, durable, practical machine, which will commend itself to your good judgment.

*Do you want Pipe Bender bulletin?  
—or complete Portable Tool catalog?*

## **Pedrick Tool & Machine Co.**

3644 N. Lawrence St., Philadelphia, Pa.

Builders of Portable Cylinder Boring Bars, Crank Pin Turners,  
Portable Millers, etc.



## The cost of time

Every man has exactly the same amount of time to spend—twenty-four hours a day.

If the time spent by lathe, miller or slotter operators walking around your plant after solid mandrels were saved, what per cent of the working day would this mean to you?

An increase in your output and profit will result if you use

## NICHOLSON Expanding Mandrels

W. H. NICHOLSON & CO.

117 Oregon St.,

Wilkes-Barre, Pa.



## No Delays

### When You Use Murchey Threading Tools

In the first place, the use of Murchey Collapsing Taps and Expanding Die Heads means perfection in threading.

In the next place, "Murchey service" enables you to keep them continuously at work. When you order Murchey Chasers you get chasers, not promises of future delivery. To continue prompt deliveries has taken lots of capital and energy, but no pains or expense has been spared to make good on "Murchey service."

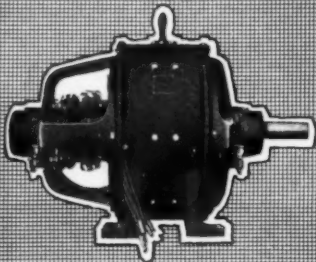
*Doesn't this look good to you?  
If so, try us out.*

Murchey Machine & Tool Co.

58 Porter St.,

Detroit, Mich.





### **How to keep motors out of repair shops**

That's what we started to find out when we went into the field to get first-hand facts before designing Type T Reliance Motors. Thirty-five electrical engineers in the largest steel plants and machine shops showed us just where weak spots were revealed in their shops. They told us what motors must stand and what from their experience was necessary to overcome their difficulties.

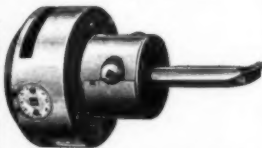
The story of how the practical experience of these men was built into Type T motors is told with 39 illustrations in our Bulletin 2014.

**Reliance Electric  
& Engineering Company**  
1050 Ivanhoe Road, Cleveland, Ohio

## A Better Method to Bore Holes

### Use Casler Offset Boring Heads

¶ You can now clamp the tool or fixture on the milling machine table and quickly bore holes accurately to size by rotating the boring tool in the Casler Offset Boring Head. This new way enables you to save much time and make use of the vertical and horizontal adjustments provided on the machine. ¶ The Casler allows quick and accurate adjustment of the boring tool, insuring a high degree of exactness in both the location and size of holes. It is compact and rigid, without projecting corners to catch the work, and with a micrometer adjustment of the offset graduated to .001".



*Catalog C shows them for both light and heavy work.*

**MARVIN & CASLER CO., Canastota, N. Y.**

## The Cure

### For a Costly Time Wasting Operation



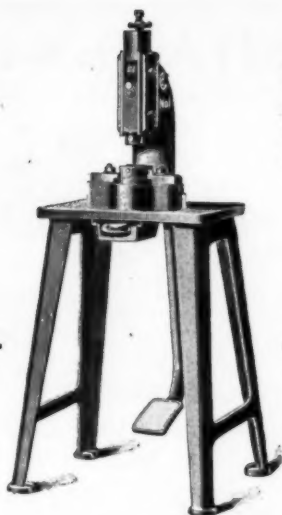
**Broken Taps Removed Quickly**

**With a Walton Tap Extractor**

When a tap breaks a high-priced machinist will very carefully try to remove it without the foreman "ketching on." This usually wastes a lot of valuable time, but with a Walton Extractor handy, this temptation is put out of business.

If you want to save time and exasperating delays on rush jobs—buy one, the cost may be returned the first time the Extractor is used. A 60 days' free trial if desired.

**THE WALTON CO., Hartford, Conn.**



**Ready  
for  
Delivery**

## **Accurate Light Punch Press**

FOR THE MANUFACTURE of novelties from sheet metal, including such operations as stamping, blanking, piercing, bending, forming, perforating, embossing, shearing and wire cutting. The No. 1 has exceptional strength for its size.

It is carefully adjusted to secure accurate working of the dies and to prevent shearing. Pendulum action of lever gives a stroke of maximum power without tiring the operator. Material and workmanship the best.

*Price is moderate. Your order can be filled promptly now—  
but don't depend on tomorrow.*

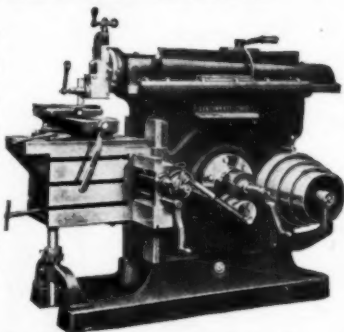
**E. O. PARTRIDGE, 2041-2049 W. Lake St., CHICAGO**

Also Bench, Column & Cabinet Grinders, Polishing Lathes, Bench Tapping Machines, Hollow Mills, Countershafts, Chuck Arbors and Saw Mandrels.

# SHAPERS

12", 14", 16"  
Plain Crank,  
16", 20", 25"  
B. G. Crank,  
either Cone  
Driven or  
through  
Speed Box.

24", 28", 32"  
Geared  
Shapers of  
the Belt Shift  
type.



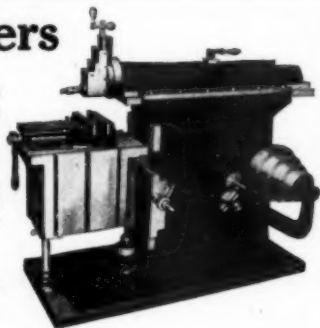
**The Smith & Mills Co.** Station B,  
Cincinnati, O., U.S.A.

# Shapers

The best medium  
priced Shaper on  
the market.

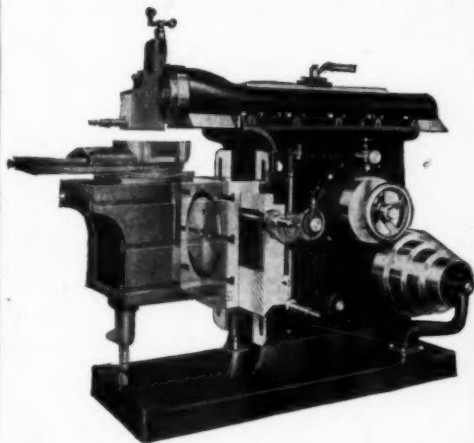
Built in 16", 18",  
and 24" sizes, all  
back geared crank  
machines.

A few for early  
delivery.



**The Osborne & Sexton Mchy. Co.**  
Columbus, Ohio

# Milwaukee Shapers

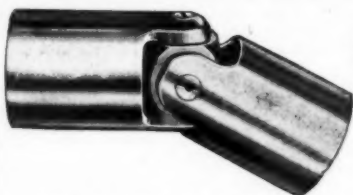


MILWAUKEE Back-Geared  
Crank Shapers are built in  
16-in., 20-in. and 24-in. sizes.

UNEXCELLED in Rigidity,  
Accuracy, Power, Production  
and Simplicity.

## Milwaukee Shaper Co.

1144-1146-1148 Holton St., 518 Prairie St.,  
Milwaukee, Wisconsin



**Giant  
Universal  
Joints  
  
For  
Heavy  
Service**

Made in sizes  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $1\frac{1}{8}$ ,  $1\frac{1}{2}$ ,  $1\frac{3}{4}$ ,  $2\frac{1}{4}$  and  $2\frac{1}{2}$  in.

Especially adapted for use on powerful, high-speed machines, for work up to an angle of 45 degrees. The wearing contacts are of hardened steel and large diameters. "Giants" are self-oiling and entirely enclosed against dirt—they take care of themselves. We also make the Vanderbeek Universal Ball Joints and solicit your inquiry for practical, reliable angular drives to meet any requirement.

**Ainslie Machine & Tool Works**

Successors to Vanderbeek Tool Works  
**HARTFORD, CONN.**

**Ball and Roller Bearings  
All Types**

English (Inch) and Metric Dimensions

<b>BALL THRUST</b>	<b>JOURNAL ROLLER</b>
<b>ROLLER THRUST</b>	<b>TAPER ROLLER</b>
<b>ANNULAR (Ball Journal)</b>	<b>PRESSED STEEL</b>
<b>STEEL BALLS</b>	

Sole Distributors for the U. S. of

**The Bowden Patent Wire Mechanism**

Adapted Throughout the World for CONTROLS on

<b>AIRCRAFT</b>	<b>MOTOR BOATS</b>
<b>AUTOMOBILES</b>	<b>MOTOR CYCLES</b>
<b>ELECTRIC SWITCHES</b>	<b>MECHANICAL DEVICES</b>

A Mechanical Device with Unlimited Possibilities

**THE GWILLIAM COMPANY**

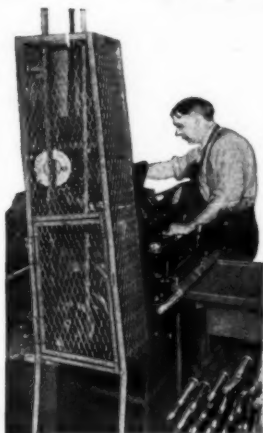
Engineers

**MECHANICAL SPECIALTIES**

253 W. 58th St. (at Broadway), New York, N. Y.

Branch Office: 1314 Arch St., Philadelphia

# **An Efficient Workman** because **He's Protected**



Remove the possibilities of injury from moving parts of machines in your shops by the use of "Econo" machine and belt guards.

**"Make 'em yourself"**

Our free book, "Econo Expanded Metal Machine and Belt Guards" tells the story.

**North Western Expanded Metal Co.**

931 Old Colony Bldg.,

Chicago, Ill.

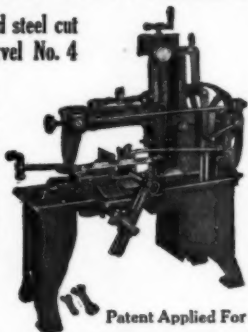
## Cuts 6-in. Steel In 10 Minutes

Smaller sizes of cold rolled steel cut in proportion by the Marvel No. 4

—a high grade, improved tool with the speed, accuracy and convenience that insures bed-rock economy.

Cuts on the draw stroke and lifts free of the cut on the return. A graduated feed wheel gives any desired pressure on the saw blade.

*Also other hack saws,  
punches and shears.  
Write for circulars.*



Patent Applied For

**Armstrong-Blum Mfg. Co.,** 341 N. Francisco Ave.  
CHICAGO, ILL.

## Saves Material at Every Cut

**Use Peter Bros. Metal Cutter for Economy  
Saves Grinding—Saves Time—Doesn't Draw Temper**

When you consider the time and material this abrasive cutter saves, you will agree with us that the purchase of one is not an expense, but a profitable investment. It makes a smooth, square cut thru high speed steel, taps, reamers, tees, brass or copper tubing, or a combination of metal and wood. Pays its own way.

**8" Size \$17.50, with C. S.**  
Splendid for tool room. Cuts high-speed steel up to  $\frac{1}{4}$ " square.

**12" Size \$50, with C. S.**  
Cuts up to  $2\frac{1}{2}$ " diameter, round or square, at any angle up to 45 degrees. Ball bearing.

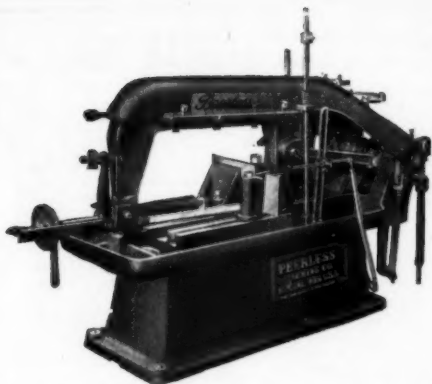
**15 Days' Free Trial**

Write us or ask your dealer

**PETER BROTHERS MFG. CO.**  
115 Railroad St., Algonquin, Ill.







**DON'T** be governed by World Wide Reputations and Previous Records in selecting your next Cutting-Off Equipment. The **NEW IMPROVED PEERLESS** High Speed Heavy Duty Metal Cutting Saw has completely revolutionized and upset all metal cutting standards.

This statement is based entirely upon the reports and repeated orders received from concerns that had heretofore used tools such as referred to.

To induce investigation we will gladly ship one for a comparative test. If you do not consider it the best and most profitable tool you have ever purchased, you are under no obligations to keep it, and we will stand the freight charges both ways.

Would you like to see a list of large manufacturers that are continually repeating their orders?

*We have it ready for you.*

**Peerless Machine Company**

1609 Racine Street,

**RACINE, WISCONSIN**

## Quickwork Rotary Shears

Never Fail to Decrease the Labor Costs from 25% to 50%;

Never Fail to Increase the Output;

Never Fail to Do Better Work.

Cuts straight lines as well as any other Rotary Shear, and in addition will cut the most irregular, serpentine and zig-zagged lines across the sheet with one passage of the metal; or it will cut any shape or opening in a sheet without cutting in from the side.

Has three speeds; both cutters driven and the metal is self-feeding, and comes through with smooth straight edges. Send for new catalog.

**THE QUICKWORK COMPANY**

Successor to H. Collier Smith, Detroit.

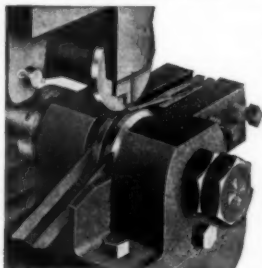
Detroit Office and Salesroom, 807-815 Scotten Avenue, Detroit, Mich.



**Twelve Sizes**  
Cutting any  
thing from  
the thinnest  
sheets to 3"  
Steel  
Plates.

## For Cutting Sheets and Plates

An Improved Process—Not a Rotary Shear



### The New Gray Sheet Metal Cutter

Makes simple work of many an extremely bothersome job which you would rather not tackle, and saves 90% of the labor cost.

It cuts all kinds of intricate patterns in sheet metal or plates up to 3/16" thick at the rate of 20 to 30 inches a minute.

Cuts a clean kerf, saving waste, and leaving the metal flat and the edges smooth.

*May we explain its wonderful scope and great economy?*

**W. J. SAVAGE CO., Knoxville, Tenn.**



## Racine High Speed Metal Cutting Machine

**Eats Steel—Standard the World Over**

**This is the only machine in the world that has an absolutely positive automatic lifting device.** This feature of it is secured by patents. Its saw frame guide prevents springing. These two features combined lengthen the life of blades used on it.

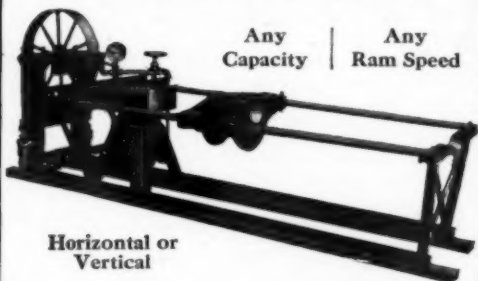
Then there is the all important fact that RACINE machines minimize wastage of material, cut accurately and speedily, are easy and cheap to operate and increase production.

Investigate the particulars of our offer before buying any other shrapnel machine.

**Racine Tool & Machine Company**  
**Racine, Wisconsin, U. S. A.**

# Hydraulic Machines

Many Designs—For Many Purposes



Any  
Capacity

Any  
Ram Speed

Horizontal or  
Vertical

Lourie Mfg. Co., Springfield, Ill.



No. 24 Press

## Efficient Equipment Atlas Presses

for building and repairing automobiles and general machine shop operations requiring pressure up to 25 tons and centering capacity up to 38 inches.

For driving mandrels; bending and straightening, broaching, embossing with dies, setting bushings and many other every day manufacturing jobs, there is an Atlas Press. All sizes for all purposes. *It will pay you to investigate.*

**Atlas Press Co.**

317 N. Park Street,  
Kalamazoo, Mich., U. S. A.

# Rams—O vs □

A friend wrote recently asking us why a round ram was better than a square ram. Our reply was as follows:—

When designing the ram for Greenerd Arbor Presses we drew a vertical center line. This line represented the line of force (arrow) and resistance **A**, for a mechanic will place his work approximately in the center of the ram. *Now the proper place to apply force is on this center line.*

If force is applied off this line a "cramp" is the result; a thing to be avoided, either in ourselves or a machine we are designing. The racks cut on the rams of Greenerd Arbor Presses are approximately on the center line of force and resistance.

Round holes, straight and true to size are easy to make in the solid frames of Greenerd Arbor Presses without using a cap. A bolted-on cap looks and is weak in comparison with the solid casting.

We use a square ram on but two sizes, the Nos. 8 and 9. These rams have a rack cut on each side. Pinions geared together operate on each rack, avoiding the "cramp." The design of these rams is such that the bearing does not come upon the face of the rack teeth.

**Edwin E. Bartlett**  
Nashua, N. H., U. S. A.

*30,000 square feet  
devoted to nothing but*

**Greenerd Arbor Presses**



# A Wonderful Combination

## In Riveting



- Speed:** one rivet per second.
- Uniformity:** each rivet headed with same degree of tightness or looseness as desired.
- Finish:** perfectly formed rivet heads, highly polished surface, no hammer or tool marks shown.

**GRANT** Noiseless Rivet Spinning Machines, are the only machines built that will accomplish the above.

*Catalog ?*

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.



## Blind Men

### Can't Turn Accurate Tapers

Yet every man you employ for that purpose is partially blind unless he can see easily and quickly whether he has really secured the desired accuracy or not.

### The Hartford Taper Gage

supplies the required extra sight. It enables the eye to detect the slightest inaccuracy and to see when the taper is right. It is simple and very inexpensive for the time it saves and the accuracy it insures.

*Drop us a line for the details*

**Hartford Special Machinery Co.**  
285 Homestead Ave., Hartford, Conn.

Cap.

20

Tons

Price

66<sup>00</sup>

Net



**WEAVER**

## Forcing Press

WE ARE SPECIALIZING upon this one size and style of press. It is the ONLY press we make, therefore we are able to produce a better article at less money than were we compelled to carry the overhead necessary to produce a great variety of styles.

5-inch, 9-pound channel steel frame, 32-in. wide, 15-in. hand wheel, carried upon ball bearings. Bronze Thrust Bearings, Screw 2 in. in diameter with 3-pitch Acme thread. Range of movement, 12 in. The screw does not revolve.

Net Price (<sup>32-in.</sup><sub>Width</sub>) \$66.00

**Weaver Manufacturing Co.**

2179 So. 9th Street,

Springfield, Illinois

## Economical on Dies & Tools

### Rhodes 7" Shapers Reduce Costs

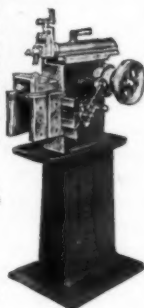
Having all the essential elements of the larger and more expensive machines, they are saving money in every part of the country and also abroad. They do perfectly accurate work on tools, dies and models—in fact, have no equal for shaping and slotting all classes of light work.

Built vertical, horizontal, and a combination of the two.

*Their efficiency will appeal  
to you—write us today*

**Rhodes Mfg. Co.**

Hartford, Conn.



## The REARWIN Die Filing Machine

is the machine you want for production. It has the pull of a 2" belt over a 12" friction pulley and is adjustable to large and small work as follows:-

**Dies for Electrical Manufacturing, Clocks, Typewriters; Threading Dies, Parts of Automobile Body Dies, and many others not mentioned.**

It can make good on your dies and other manufacturing.

*Circulars for the asking*

**W. D. Rearwin**

341 Mill Ave., Grand Rapids, Mich.





# Skeptics!

## You Want Better High Speed Tools at Less Cost

But you are skeptical. Can't say that we blame you. But we are not asking you to buy a pig in a poke. You can even eat part of the pig, and if you don't like it you don't have to pay for it. All we ask is permission to send you, at our own risk and expense, a 100 lb. bag of

**HE TZY**  
HEAT EASY

### High Speed Tool Hardening Compound

You may try it out thoroughly, and then you may return what is left—still at our expense—if it doesn't give you better high speed tools, while positively eliminating all chance of distortion, pitting, bursting or breaking, and if it doesn't enable you to harden a pot-full at a time, much more cheaply, with about 450 degrees less heat and without special equipment—in fact, if it isn't worth to you a great deal more than its cost, then send it back.

Wouldn't such a proposition soon bankrupt us if HeTzy didn't make good? The answer is that it *does* make good, as hundreds of delighted users can testify.

*Acceptance of this offer by skeptics is especially invited  
Former skeptics are now our best friends*

**Bennett Metal Treating Co.**  
Elmwood, Conn.



# WHO

Ever Heard Of A  
Tap With Brains

?

## The "Double Gripp" Safety Tapping Chuck

knows enough to stop when the tap  
hits the bottom or gets in trouble.

Ask Your Dealer  
or Write Direct.

*They are sold on approval*

**William L. Procunier**  
549 Washington Blvd., Chicago, U. S. A.



## Red-E Milling Dog and Driver

Assures Correct Spacing and True Taper



Its use means correctly in-  
dexed milling in your shop.  
No spoiled or botched work.  
Invaluable in cutting gears  
and similar work. The secret of its success is the  
sliding tail with ball and socket joint.

*Work, Time and Worry Saved with our Dogs and Tools*

**THE READY TOOL COMPANY**  
Bridgeport, Conn.

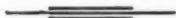
**Use-Em-Up and Standard Type**

# **Drill Sockets**



**Use-Em-Up Type**

**All Kinds  
All Sizes**



**Special  
Tools Made  
To Order**



**Standard Type**

**The Collis Company**  
**Clinton, Iowa**



**Any  
Hard  
Stunts  
?**



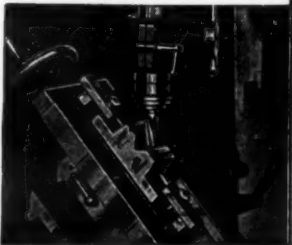
## **This Machine Makes Them Easy**

Difficult, awkward machine work is made comparatively easy with Knight Milling and Drilling Machines. Having the convenience and adaptability of 2 or 3 ordinary tools of this kind, they never fail to speed up the work, whether it's making a forming tool, milling a die block, or doing some slotting work. The three sizes, large, medium and small, afford a satisfactory choice.

*They save time and reduce costs. Write for description.*

**W. B. Knight Machinery Company**  
**St. Louis, Mo.**

**Send for our  
Booklet which  
gives many  
practical pointers  
for tool room  
and shop.**



# 12 YEARS

In commercial use  
cutting good keyseats.

*Get Catalog O for Details*

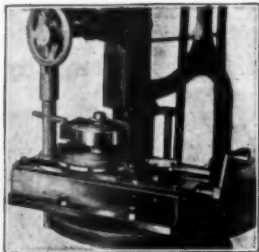
## National Machine Tool Co.

2268 Spring Grove Ave., Cincinnati, O.



## Indexing Boring Fixture

A Valuable Drill Press Attachment



Adjustable from 6" to 16" center distance. Has interchangeable dial for indexing, and can be arranged to take different sizes of boring bars. It is accurate, handy and a big time saver. Weight, 150lbs.

We also specialize in designing, developing and building special machinery and parts. What have you?

*Correspondence invited. No obligation incurred in writing.*

## Westchester Machine Co.

Mount Vernon, N. Y.

# The "CINTI" 12-Inch Automatic Tapping and Drilling Machine



Patents Allowed and Pending.

**Quick  
Accurate  
Sensitive**

Clutch and reversing mechanism can be set to tap to any desired depth, reverse automatically, and then stop the spindle. Extreme sensitiveness for light tapping, or tapping in soft metal, is secured by mounting the lower pulleys on an eccentric shaft which is revolved with a knob on the right side of the column. This adjustment is at once fine, easily made, and not affected by vibration. Each machine is furnished with four spindle-lead attachments, to tap 16, 18, 20 and 24 threads per inch; those for any others supplied on order.

In both materials and workmanship the "Cinti" measures up to the highest standards, and our guaranty is always behind it.

Also made in the bench type.

*Full Specifications Gladly Sent You  
No obligation. Ask for them.*

**W. H. Simmons & Company**  
208-12 Lawrence St., Cincinnati, Ohio



## Kelly PRODUCTION Tools

for Cylinders,  
Crank Cases,  
Connecting Rods,  
Auto Parts, Etc.

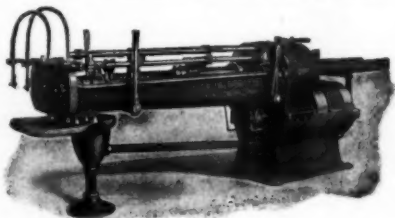
We Make  
**DELIVERIES**  
in 1 to 10 Days

They  
"ADJUST"  
Write for Catalog G-H

TRANSMISSION CASE TOOLS (13 OPERATIONS)  
FOR MOLINE PLOW COMPANY  
J. M. DAVIS, GENERAL SUPERINTENDENT THE KELLY REAMER CO.

**THE KELLY REAMER CO., CLEVELAND, OHIO, U. S. A.**  
C. W. Burton, Griffiths & Co., London, English Agents.  
Burton Fils, Paris, French Agts. 40 Domestic Agencies.

## Broaching Machines And Broaching Tools



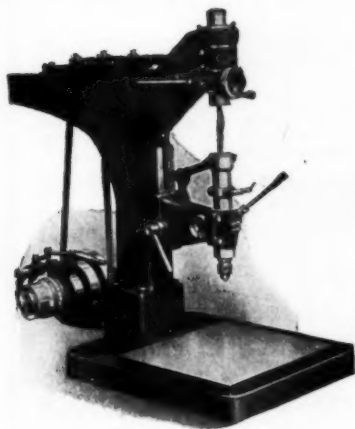
### Our Famous Double Machine

The Most Complete Line In The World. We make our machines in 5 sizes and 11 types. *Send for particulars.*

**THE J. N. LAPOINTE CO., - - New London, Conn.**



# THE *Avey* BALL BEARING DRILLING MACHINES



Hundreds  
of  
Shops  
are  
Modernizing  
their  
Drilling  
Departments

---

## Enormous Increase In Output

in drilling small holes may be obtained by  
using the No.  $\frac{1}{2}$  machine above shown

## Spindle Speeds Up To 12000 R.P.M.

*We have other sizes and types including  
automatics to enable specializing on any job*

**The Cincinnati Pulley Mch. Co., Cincinnati**



## The Fenn No. 1 Friction Tapping Machine

### Saves Money Two Ways

*First*, it is so simple in construction that its first cost is low—so low, in fact, that no one now can afford to do tapping by hand.

*Second*, its extreme sensitiveness to the will of the operator enables it to save time and cost at every turn—both forward and reverse—when compared with any gear-driven machine ever built.

*Want particulars and prices?*

### Fenn Manufacturing Company Hartford, Conn.

Cable Address "Fenn." West. Union Code  
W. L. Fenn W. A. Fenn  
(Formerly of the Taylor & Fenn Co.)



## The One-Piece, Low-Priced "Wear-Ever" Tap Chuck

### Saves Time and Taps And Outlasts All Others

This one-piece tap chuck is sold at a low price and it outlasts several friction chucks.

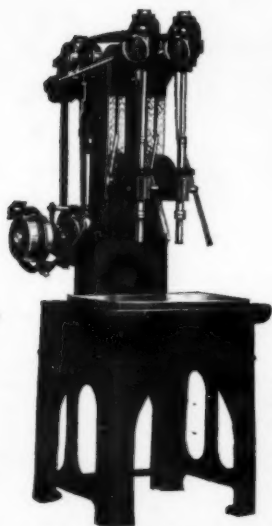
It adjusts automatically to any variation in shank, which saves time, and as the tap always runs true, it saves tap breakage.

It saves in every way—in cost, renewals, time and taps. No screws to adjust. Always a positive drive.

*You need it. What's your address?*

### Scully-Jones & Co.

Room 555 Railway Exchange Bldg., CHICAGO



With  
One  
to  
Eight  
Spindles

For  
 $\frac{3}{4}$ -in.  
Drills  
and  
Smaller

## Henry & Wright Drilling Machines

**Consume the Least Power—Drill the Most Holes**

The drilling machine which consumes the least power in transmission delivers the most power for drilling purposes.

Henry & Wright Drilling Machines have a gearless power transmission with frictionless bearings, which delivers the maximum of actual working power.

This superiority, with their sturdy design and their many conveniences for facilitating production, places them in a class by themselves.

*Particulars—and our Feed and Speed Chart—both free*

**The Henry & Wright Mfg. Co.**  
706 Windsor St., Hartford, Conn.

## Bench Drills

with 1 to 4 Spindles  
 $\frac{1}{2}$ " Capacity.

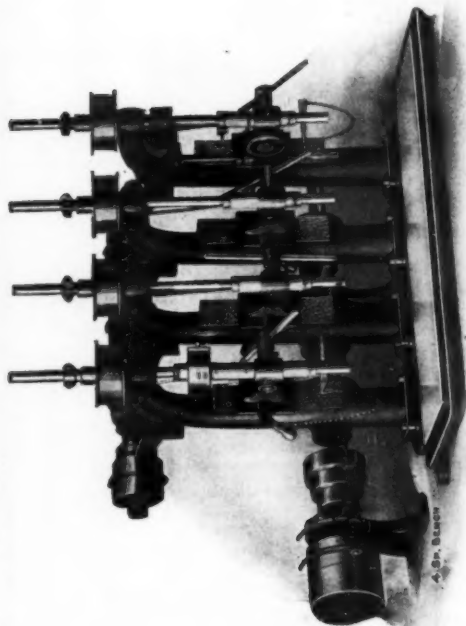
## Floor Drills

1 to 7 Spindles  
 $\frac{1}{2}$ " to  $\frac{3}{4}$ " Capacity.

Power feed on as many  
spindles as you want.

**Francis Reed Co.**

43 Hammond St.  
WORCESTER, MASS.





## FEATURES

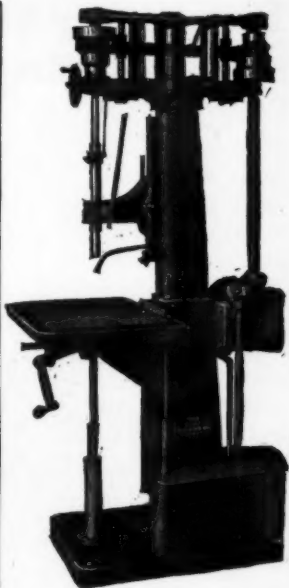
**Quick  
Change Speed**  
Change in 2 seconds

**Most  
Efficient Drive**  
No belt troubles

**Safety First**  
All parts protected

**Heaviest  
Drill Made**  
Yet very sensitive

**All Ball Bearings**



**What  
Users  
Say:**

Garrison Machine Works, Dayton,  
O., say:

"As to our experience with Sipp  
Presses, would say that they seem  
to be a real machine and out of the  
class of ordinary drill presses."

*Write for Bulletin No. 4 telling why.*

**THE SIPP MACHINE CO.**  
Keen Street, Paterson, N. J.

# Radbore Offset Boring and Facing Tool

## Uses

For boring out holes from very small to approximately 6 inches. For facing—done by means of star nut on adjusting screw, by former coming in contact with a pin on the miller column.

Has a hundred and one uses in any toolroom or machine shop—replaces makeshift bars—once used, always used.

## Advantages

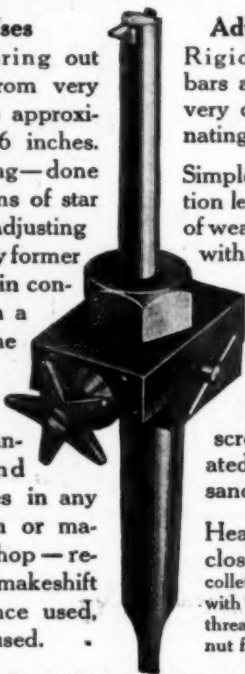
Rigidity—these bars are coupled very close, eliminating all spring.

Simple construction lessens chances of wear and abuse with hard usage.

No complicated, eccentric motion.

Micrometer screw graduated in thousandths.

Heavy box nut closes spring collet, doing away with set screw and threaded bars. Star nut for facing.



*For further information write to*

**LAWSON & COMPANY, Inc.**

416 West 33rd St., New York City

CHAS. A. STRELINGER & CO., DETROIT, Sole Agents for Michigan

## SQUARE HOLES

May Be

## DRILLED

With The

## RADBORE HEAD

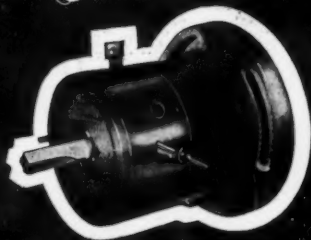
in any substance, in one operation, accurately. Think what this means in strength of construction and simplification of design.

**LAWSON & CO., Inc.**

416 West 33rd St., New York City

Chas. A. Strelinger & Co., Detroit  
Sole Agents for Michigan

*To  
Engineers and  
Designers*



# **"WHITNEY"**

## **Key-Seat Cutters**

**For the Woodruff System of Keying**

### **Get Our Prices**



**Either Carbon or High Speed Steel.**

**Material the Best Obtainable.**

**Unsurpassed in Efficiency and Durability.**

**Unsurpassed in Accuracy and Finish.**

**Centered at Both Ends.**

*Large Quantities Carried in Stock*

## **The Whitney Mfg. Co.**

**Hartford, Conn.**

**Chains Keys and Cutters Hand Milling Machines**



*Specify  
B&S Cutters*



## MORE GEARS PER CUTTER



**E**VERY time a cutter takes a trip to the grinding wheel its period of usefulness is lessened in exact proportion to the number of resharpenings it will stand.

### **Brown & Sharpe Cutters**

will stand up under the heaviest of service for long periods between resharpenings and stand many, many trips to the grinding wheel owing to the way teeth are cut and relieved. That's why their use in your gear cutting department will result in more gears per cutter.

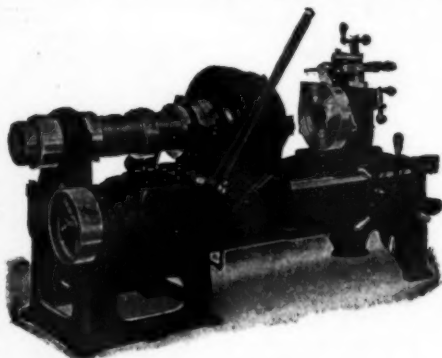
*Send for Catalog 27.*

*It's a reliable guide to a reliable cutter service.*

**BROWN & SHARPE MFG. CO.,  
PROVIDENCE, R.I., U.S.A.**

# Built Like a Battleship

**Stands the Grind—Ready for Emergency**



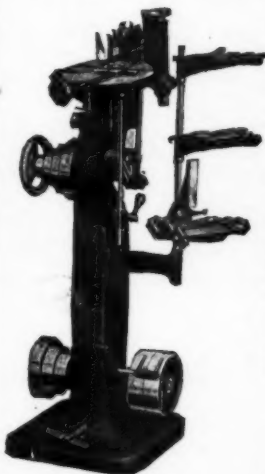
**YOU ARE ALWAYS SAFE** with B. & K. Pipe Threading and Cutting Machines. Whether you have large quantities of certain sizes of pipe to thread, or have many small jobs to take care of—B. & Ks. will give you top-notch service.

The 17 styles and sizes are made to be handled without gloves—they stand up perfectly in making up fittings, which, as you know, is harder on machines than thread cutting. They are instantly adjustable; nipple holders do not injure threads; chuck jaws are readily sharpened without drawing temper.

*Send for our catalog of reliable,  
up-to-date, economical machines*

**Bignall & Keeler Machine Works**  
**Edwardsville, Ill.**

## Cochrane-Bly Machines Insure Accurate, Low-Cost Filing



**No. 2 Filing Machine**

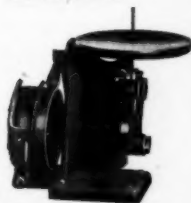
The Bench Filing Machine, shown on the right, is compact and convenient for light filing. Furnished with or without Upper File Support.

Accurate filing by hand is difficult for the expert; with the Cochrane-Bly No. 2 Filing Machine it is rapidly and perfectly accomplished at minimum cost.

Table is adjustable, also length of stroke, and there are four speeds.

The standard equipment includes arms for Hack Sawing and extension holders for Jig Saws.

This machine meets the most exacting tool room requirements where close finish is desired.



**Bench Filing Machine**

*Glad to mail you complete description*

## Cochrane-Bly Company

**Rochester, N. Y., U. S. A.**

**Also Cold Saws and Automatic Cold Saw Sharpeners  
Universal Shapers for Die and Tool Work**



## Fairbanks Hammers

25 to 300 lbs.

### Belt or Motor Drive

These Hammers Embody  
a Design and Workman-  
ship that are Unsurpassed.

*Send for Catalog*

**United Hammer Co.**  
Oliver Building, Boston, Mass.

#### SALES AGENTS

The Fairbanks Company—Albany, Balti-  
more, Boston, Bridgeport, Buffalo, Chicago,  
Hartford, Newark, New Orleans, New  
York, Philadelphia, Pittsburgh, Providence,  
St. Louis, Syracuse, Havana, London,  
Glasgow, Hamburg, Paris.

Hill, Clarke & Co.—625 Washington Blvd.,  
Chicago, Ill.

## Inventory Is Now Very Near

### How About That Bar Stock?



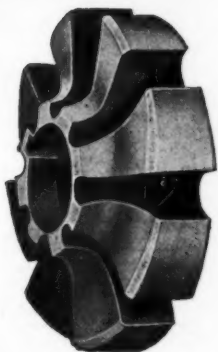
Pipe, shafting and bars are about the  
easiest things to get mixed up or scat-  
tered around, often in the way, so that  
you don't know what you have or  
where to find it. That's awful, when  
the inexpensive

#### "Handiest Racks"

will keep them in compact shape in a  
fourth the space, where you can see  
what you have, where you can keep  
them assorted and counted, and  
where you can get at them easily and  
quickly.

Hadn't we better describe and  
quote NOW, so you may have time  
to change that mess into tidy stock at  
invoicing time?

**Wm. S. Yohe Supply Co.**  
232 Second St., S. E., Canton, Ohio



## Being Able to Produce

Quickly and accurately, are some of the many reasons for the steadily increased demands for our

### **SPECIAL CUTTERS**

SEND US BLUE PRINTS OR TEMPLETS  
FOR QUOTATIONS

**The Cleveland Milling  
Machine Company**

18511 Euclid Ave.      Cleveland, O.



Style "C"



The Hinge



Style "Y"



Style "B"



Style "G"



Style "O"



Style "L"



Style "T"

### GITS OIL CUPS

Give perfect satisfaction where others fail. State style and size in which you are interested, and we will send free samples and catalog.

GITS BROS. MFG. CO.  
555-557 W. MONROE ST., CHICAGO



Style "H"

## "Duckworth"



### Sprocket Chains

We are now in a position to furnish either Block or Roller Type Chains up to and including  $\frac{3}{4}$ " Pitch, promptly.

**Duckworth Chain & Mfg. Co.**  
**Springfield, Mass.**

The Largest Manufacturers of Motorcycle Chains in the World



## Dwight Slate Marking Machines

Hand and Power  
In Several Styles

We also make  
a specialty of

## Die Cutting

For these machines

We Have  
**Expert Engravers**

*Write for the  
Marking Machine  
Catalog*

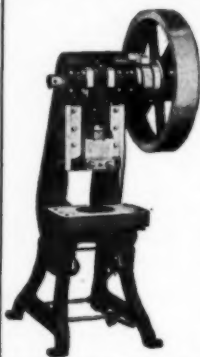
## Also the Noble & Westbrook Up-To-Date Filing Machine Which is Illustrated Above

This is an exceptionally accurate, convenient and productive filing machine. Hardened roller bearing, adjusted by a knurled screw, eliminates file breakage and increases production. An adjustable chuck; permits the use of standard straight files. The stroke is adjustable from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches. Graduated head gives proper angle at a glance. Head may be tilted to any degree. No filings can drop into working parts, which are above the table. All bearings are phosphor bronze.

*Complete description will interest you. Your address?*

**The Noble & Westbrook Mfg. Co.**  
Hartford, Conn., U. S. A.

# Here Is A Press



With Plenty of Steam  
Back of THE PUNCH

HIGH DUTY  
**ROCKFORD**  
PUNCH PRESSES

Made in straight side and inclinable types. Their great power backed by rigid design enable them to do the work you demand and stand up to it.

*Write For Catalog*

**Rockford Iron Works**  
Rockford, Ill.

# Much Cheaper Burnishing Of a Higher Quality



The  
Abbott  
Burnishing  
Barrel

Of course you would like to burnish your small metal parts at a saving of 75% to 99%, especially when you can improve their quality at the same time.

Of course you would. But —we know how it is—you are busy and put it off.

But isn't such procrastination rather expensive? Why not write today for our free copyrighted booklet on burnishing, and post yourself, anyhow?

*Also send along samples for burnishing, if you wish*

**The Abbott Ball Company**  
Elmwood District, Hartford, Conn.



# Old Cutters Made New

Without Annealing or Altering Temper  
And We Pay Express One Way

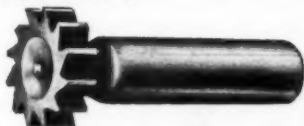
This side  
shows after  
recutting



This side  
shows before  
recutting

## 60% Off List for Milling Cutters

We recut Milling Cutters to the largest diameter by eighths, and to the greatest thickness by sixteenths of an inch, and mark them with your size. They are like new in finish, cutting quality and accuracy.



## 70% Off List on Woodruff Keyseat Cutters

We recut Woodruff Keyseat Cutters to the next smaller size, without annealing, so the shanks will remain standard.

Over 1,500 manufacturers are saving thousands of dollars annually through our service, and we want to save money for you. Send us a cutter you were going to scrap, or dig one out of the scrap pile, and let us return it to you as good as new. We guarantee all our work to give complete satisfaction.

**Peninsular Tool Salvage Co.**  
Detroit, Mich.

# ELECTRIC EUCLID HOISTS

## Let OUR Engineers Save YOUR Time

It is possible that you realize the need of modern material handling equipment but cannot spare the time or men to work out the details.

Our engineers are constantly solving these difficulties and helping manufacturers reduce expenses.

Furthermore, this service is absolutely free.

Will you take advantage of it?

**The Euclid Crane & Hoist Co.**

Dept. C

EUCLID, OHIO, U. S. A.

## Cantons Are Doing a "Big Bit"

Each Lifts and Lugs for 6 to 10 Men



Whether Uncle Sam sends your men to his cantonments, or whether you have to "get a hump on" because of the general scarcity of labor—

### "The Handiest Tool In the Shop"

will prove a great help wherever it can be used. Heavy castings and machinery are carried in perfect safety. Booklet E-8 tells all about them—*write now.*

**CANTON FOUNDRY & MCHE. CO., Canton, O.**



## Sanitary Steel Lockers

Most of your workmen appreciate good treatment, especially those who count the most. You increase both their loyalty and their self-respect when you provide them with safe, sanitary, individual lockers, which protect their belongings against meddlers, thieves and vermin.

The Terrell Steel Lockers are of this kind. Made in a variety of styles and sizes, either single or double tier, they adapt themselves to available spaces and meet any special conditions at moderate cost.

*Complete information at your service without obligation*

**Terrell's Equipment Company**

Hall & Division Sts., Grand Rapids, Mich.

# Pattern Shop Machinery

Special Prices if you refer to this ad.



## Band Saws

Chicago No. 00 27 in. Wheels

" No. 0 32 " "

" No. 1 36 " "



## Saw Tables

Chicago No. 5 Stationary Table

" No. 9 Tilting Table

" No. 10

Boring attachment if wanted.



## Jointers

8 in., 5 and 6 ft. tables and guard.  
12, 16, 20, 24 and 30 in., 7 ft. tables  
and guard.

Trimmers, Lathes, Core Box Tools, etc.

Ask for full descriptions

## Chicago Machinery Exchange

1214-1228 Washington Boulevard, Chicago

## Manufacturers:—

Let me figure with you on your requirements. Send blue prints for estimates on:

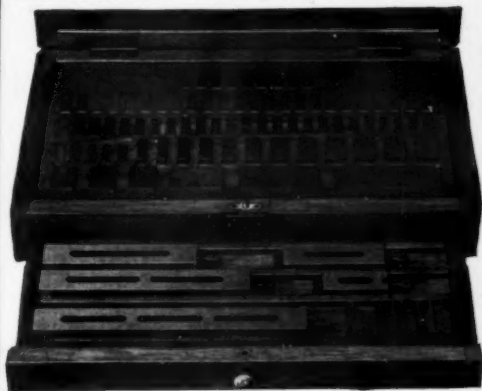
Tool Making,  
Stampings,  
Special Machinery,  
Machine Parts,  
Screw Machine Work.

*First-class shop, expert workmen*

**R. G. Clyne Machine Works**

Columbia Bldg.,

St. Louis, Mo.



## **S. & S. American Gage Standards**

**represent the highest accuracy  
human skill can produce**

**They are manufactured in the United States by  
Experts of Life-Long Experience.**

**Blocks are finished on all sides. Measuring  
surfaces are absolutely flat, parallel and accurately  
standardized at 62° Fahr.**

**S. & S. Gage Standards are sold under a Guar-  
antee which protects you fully—a guarantee we can  
afford to make because we know they will fulfill  
every claim made for them.**

*Most complete line made anywhere. Quick deliveries.  
Write at once for full information.*

**Schuchardt & Schutte**  
**West Street Building, New York**



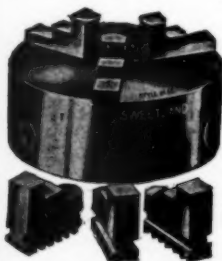
*We manufacture a great variety*  
**Lathe Chucks, Drill Chucks, Centering Chucks**  
*Also*  
**Portable Jaws for Lathe face plates and Machine tables.**

*Let us send you our Catalog*

**The Cushman Chuck Co.**  
*Established 1862* **Hartford, Conn.**

## Sweetland Lathe Chucks

**Extreme Accuracy—A Bull Dog Grip**



They have great gripping power, ready adaptability and extreme accuracy. Sweetland chucks that have been in use from 20 to 30 years are giving accurate service today.

The Sweetland Line affords a wide selection in Independent, Combination, Geared Scroll and Special Chucks for all lathe requirements.

*Ask for Catalog No. 10-C*

**The Hoggson & Pettis Mfg. Co.**  
**New Haven, Conn.**



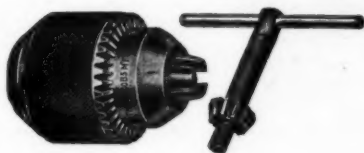
## The Test of Use

They are demonstrating their efficiency, their accuracy, their convenience and their all-around dependability every day in thousands of plants all over the world. They make good because they are good, as every user knows.

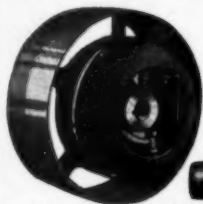
Manufactured by

**The Jacobs Mfg. Company**

Hartford, Conn., U. S. A.



## Experience Has Proven Them The Best Clutches Made



Enclosed Type, Self-Oiling

When the leading machine tool builders of the country (names on request) have used the—

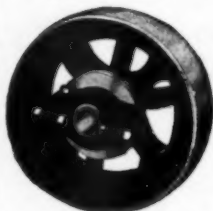
### Edgemont Friction Clutches

year after year, it is because they have found them to be "*the best clutches made*," in strength, simplicity and efficiency. If not, they would have replaced them with something else long ago.

*Particulars, proofs and prices upon request*

**The Edgemont Machine Co.**  
Dayton, Ohio

## Dependable Friction Clutches



### Dependability

They are thoroughly dependable under the hardest use, because they are built simply and compactly on well-known mechanical principles. There is not an experimental feature in them.

### High Power

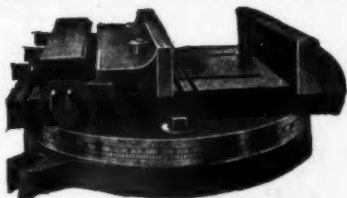
The large diameter friction disc permits a full uniform grip around the pulley. Result, ample power under all conditions of speed and service. Just oil them every second month without throwing off the belt—that's all.

*Investigate these newer, better, high-power clutches*

**PASSMAN BROS.,** 30 S. Green Street  
CHICAGO, ILL.



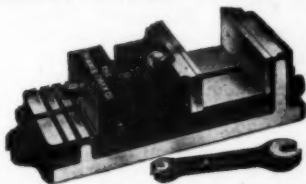
## Skinner Planer Chucks



We can make immediate delivery of Skinner Planer Chucks in all sizes, with round or square base.

They are heavy and powerful—the heaviest made; guaranteed not to spring under the severest service. The kind for railroad shops and steel mills, or wherever the requirements call for chucks of the very sturdiest character.

## Skinner Drill Press Vises



Widely known as the "Handy-tools." They are similar to our Planer Chucks, but more portable and convenient for use on a drill; adjustable for drilling at an angle.

*Write for No. 30 Catalog and Price List  
Just received from Printer*

## The Skinner Chuck Co.

San Francisco Office:  
Rialto Building.

London Office:  
149 Queen Victoria St.

Factory and Main Office:  
New Britain, Conn.

New York Office:  
94 Reade Street

# Yes Sir, the "Rarefied"



## Gets the Dust—Economically

**Knickerbocker Says:**



NO MATTER how cutting, grinding, heavy or "obstinate" the dust—whether raised by emery and polishing wheels, sand blasts or tumbling barrels, the "Rarefied" Dust Collector does a thoroughly good job at rock-bottom cost.

The Collector is located between the source of dust supply and the fan, so that the fan *draws* the air through the collector and maintains a constant vacuum tendency—the "rarefied" principle—in the collector casing. The dust is collected and automatically discharged before the air reaches the fan. This prevents abrasion of fan parts, reduces repairs to a minimum, and gives long life to the fan.

*The "Rarefied" combines efficiency, economy and durability. Write for our interesting Booklet*

**The Knickerbocker Company**  
Jackson, Mich.

## Contract Work Wanted

This department is exclusively for the use of those desiring to secure contracts for anything in the line of foundry or machine work, including press work, dies, jigs, fixtures, gears, die castings, drop forgings, screw machine products, springs, bolts, nuts, rivets, etc. Advertisements are to be set with side headings as shown, and with such display as may be appropriate to the copy used. Rates: one-eighth page, per month, \$4.

<b>Gauges, Jigs Dies, Tools and Light Machinery</b>	<b>Model Tool &amp; Gauge Co.</b> <b>185 John St., Bridgeport, Conn.</b> Quick deliveries on gauges, jigs, dies and tools. Light machinery built on contract. Send us your specifications. We shall be pleased to quote.
<b>Dies, Tool General Machine Work</b>	<b>Chicago Die &amp; Machine Works</b> <b>415 N. Carpenter St., Chicago, Ill.</b> We are equipped to render satisfactory service on all kinds of general machine work. No job too big or too difficult. Established 1876.
<b>Patterns</b>	<b>W. J. Nobach Pattern Works</b> <b>411-13 S. Clinton St., Chicago</b> Our specialty is "Patterns" of wood, brass, aluminum match plate and for moulding machines of all description. You no doubt know the present condition of business which renders it almost impossible to get first class Pattern Makers, but we are abreast with the situation here.
<b>Jones &amp; Lamson and Machine Work</b>	<b>Wanted:</b> Bar work for Jones & Lamson turret lathe; also milling machine, lathe or drill press work. Factory centrally located in CHICAGO. <b>Address:</b> M. L., Care of Hitchcock's Machine Tool List, 1220 Caxton Bldg., Chicago.
<b>Sheet Metal Stamping Dies and Tools</b>	<b>Walter L. Schultz</b> <b>29 So. Clinton St., Chicago, Ill.</b> We solicit your inquiry for sheet metal stamping. Manufacturing a specialty.
<b>Machine Work</b>	<b>Elwood Lawn Mower Mfg. Co.</b> <b>Elwood, Indiana</b> Lathe, planer, drill and punch press work, on contract or hourly basis. Mail us your specifications for estimate.
<b>Want Orders for Die Casting?</b>	This is the place where you can offer your facilities to users of metal products everywhere in the United States. Many readers of the Tool List are in the market for die castings, and they would welcome information as to what you can do for them.

# CONTRACT WORK WANTED

<p><b>Dies Tools Special Machinery</b></p>	<p><b>Robbins, Gamwell &amp; Co.</b> Pittsfield, Mass. Accuracy and efficiency in gages, dies and special machinery, is our specialty.</p>
<p><b>Sheet Metal Stamping</b></p>	<p><b>Frank B. Lothrop Co.</b> South Acton, Mass. Blanking, Bending, Deep Drawing, Nickel Plating.</p>
<p><b>Is Your Equipment All Busy?</b></p>	<p>Why not get in some special work to fill in the idle time? Let the manufacturing public know what you can do, and what machinery you have to do it with. Space in this department costs but little, and covers the metal manufacturing field as with a blanket. Why not try it?</p>
<p><b>Sheet Metal Stamping and Manufacturing</b></p>	<p><b>Batavia Specialty Co</b> Batavia, N. Y. We solicit your inquiries for light sheet metal stamping and manufacturing of specialties.</p>
<p><b>Dies, Tools Automatic Dies and Sheet Metal Products</b></p>	<p><b>Nelson Tool Company, Inc.</b> No. 781 East 142nd Street, New York City We are well equipped to manufacture sheet metal articles made in automatic dies and machines.</p>
<p><b>Dies, Gauges Jigs and Fixtures</b></p>	<p><b>A. N. Van Deman</b> 95 William St., New York City Model and experimental work; special machinery built to order; contract manufacturing. Finished parts, of intricate shapes, accurately produced from electrolytic copper</p>
<p><b>Machine Work</b></p>	<p><b>The Knight Manufacturing Co.</b> 1510 Market Ave., S., Canton, Ohio Lathe, planer, milling machine, gear cutting and drill press work, on contract or hourly basis. Mail us your blue prints for estimates.</p>
<p><b>Work for Your Idle Equipment</b></p>	<p>You can get it, if you will let manufacturers know just what you can do. Tell them through this department. The cost is small; the distribution covers the metal manufacturing people everywhere in the United States.</p>

# CONTRACT WORK WANTED

Brass and Bronze  
Castings and  
Bushings  
Rough or Finished

**The Aetna Brass Mfg. Co.**  
Cleveland, Ohio  
Two Large Plants

Drop  
Forgings  
(All Kinds)

**Bonney Vise & Tool Works, Inc.**  
Allentown, Pa.

**Quick and Accurate Drop Forging and Finishing**  
Good tools, good men, and good management insure precision and promptness. Investigate; when you know our facilities and our record you'll want our service.

Pressed and  
Stamped  
Steel Parts

**Geuder, Paeschke & Frey Co.**

1325-1700 St. Paul Av., Milwaukee, Wis.

It will pay you to let us figure on such pressed, stamped or drawn metal articles or parts as you may require, be they made of steel, aluminum, brass or copper. Our 15-acre plant at your disposal. Get the benefit of our "Knowing how since '81." Send samples or blue prints for est.

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Aluminum  
Castings  
General  
Machine Work

**Rundle-Spence Mfg. Co.**

63-69 2nd St., Milwaukee

We are fully equipped to manufacture complete, anything in the brass line. Experimental and repair work. Engine, Fox, turret and speed lathe work. Light stamping. Electro plating. Mail your prints for prices and deliveries.

## Want More Orders?

They are to be had for special contract work in machining, stamping, forging, casting, welding or any department of machine manufacturing. The problem is merely to bring the capacity and the demand for it together. If you have the idle capacity, and want work for it, the "Contract Work Wanted" department of the Tool List will help you to get in touch with machine-making plants everywhere in the United States. Its circulation among American metal working plants is country-wide. There is no other available means by which you can reach so many.

Don't let your equipment stand idle. That costs money — a lot more than it will cost you to find work for it. Write me for further information, and for a copy suggestion, which I shall be glad to make without cost or obligation.

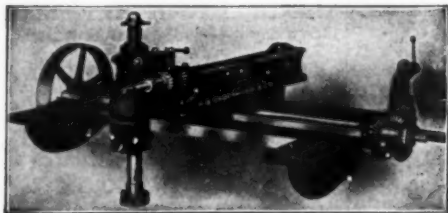
**A. H. Hitchcock, Publisher**

**Hitchcock's Machine Tool List**

1220-1235 Caxton Building, Chicago, Ill.

# Make Your Repairs In Place

With Underwood's Portable Miller



**N**OT ONLY is this handy tool rapid and accurate, but it accomplishes a wide range of repairing in place. It is operated by hand, small steam engine, air or electric motor.

It faces a valve seat 22x40x7 in., or does other milling of similar scope. Has power feed in both directions, and is usable in any position—horizontal, vertical or inclined. On many jobs it saves as much as 50% of time, especially in railway and general repair shops. We can build to suit your special needs.

**Our comprehensive line of Portable Tools includes:**

Millers; circular planer tools; radius planers; rotary planers; machines for truing eccentrics, facing domes, arms for facing cylinder flanges; rotary flue cleaners; armature and axle bearing borers; pipe benders; locomotive cylinder borers; boring bars for lathe work; crank pin turners; reflex water glass grinders; rail saws; motors, etc.

*We've been making 'em for nearly 50 years—send for our Catalog*

**H. B. Underwood & Company**

1016-22 Buttonwood St., Philadelphia, Pa.

## Second-Hand Machinery.

Lists of Second-Hand Machinery, either for sale or wanted, set in uniform style, will be published under this heading at the rate of **50 cents a line**, across the page, each issue. Minimum charge, **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. No display in this department.

**Write directly to those offering the machines for sale** for prices and full descriptions. If what you require is not listed, use the blank enclosed to make known your wants to the publisher.

### FOR SALE BY

**The Cincinnati Lathe & Tool Co., - North Street, Cincinnati, Ohio**

#### AUTOMATIC.

One  $4\frac{1}{2}$ " Gridley automatic, motor drive, 220 volt, d. c., one year old, first-class condition.

### FOR SALE BY

**The Enterprise Machinery Co.,**

**28-30 S. Clinton St., Chicago.**

Boring mill, cyl., Hoefler 2-sp. \$1400.  
Boring mill, hor., 2 hds. 450.  
Bulldozer, No. 2 W. & W. 475.  
Cold saw, Atlantic, 24" auto. gr. 275.  
Drill, 2 sp.,  $\frac{1}{2}$ " cap. 60.  
Drill, 22" b. g., p. f., Hamilton 150.  
Drill, Gardam 8-sp. 575.  
Drill, 28" b. g. Blaisdell 100.  
Drill, radial, 14",  $1\frac{1}{2}$ " cap. 200.  
Furnace, gas, 6' x 2'-6" 175.  
Grinder, Yankee drill, 35.  
Grinder, edge, 12', like new. 500.  
Lathe, Barnes, 12" x 5', ck. 75.  
Lathe, 20-25" x 10' out rest, p. c. f. 400.  
Lathe, Rahn 18" x 6', ck., c. r. 450.

Miller, pln., No. 2 Cin., vise, .5 450.  
Miller, Merritt, div. hd., hvy. 450.  
Planer, New H., 20" x 4', vise. 230.  
Press, kick, on stand. 19.  
Press, pwr., new,  $\frac{1}{2}$ " in 1-16" 60.  
Punch press, s. b. 34" fly, heavy 250.  
Punch, hyd. gang, 12' bet. hous. 150.  
Punch, gang, 3' bet. hous., b. g. 175.  
Screw mch., 2x24 J. & L. 800.  
Screw mch., 24" S. & K., 6 stops 675.  
Scr. mch., Acme No. 53, 4-sp. 1" 1400.  
Scr. mch., W. & S. 14", 250 tools 825.  
Shaper, Gould, crank, 10" 125.  
Shear, sq., 30" gap and 35" 38.  
500 other tools. Write us.

### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.,**

**1001-3-5 N. Sixth St.,**

**St. Louis, Mo.**

#### LATHES.

15" x 5' Prentice.  
16" x 8' American, q. c.  
16" x 6' Rahn & Carpenter.  
16" x 8' Bradford.

18" x 8' Forsaith.  
18" Fox Monitor.  
24" x 12' Forsaith.

#### SHAPERS AND PLANERS.

20" Steptoe, back geared crank.  
20" Lodge & Davis, geared.

24" x 24" x 6' Lodge & Davis.  
36" x 36" x 14' Pond, one head.

#### MOTORS AND GENERATORS.

50 k. w. 125 volt generator.  
55 h. p. 500 volt motor.  
60 k. w. 3 ph. 60 cycle 440 v., with  
exciter and switchboard.

80 h. p. 500 volt motor.  
150 k. w. 250 volt generator.  
174 k. w. 125 volt generator.

#### MISCELLANEOUS.

Beader, No. 0 Niagara, heavy.  
Boring machine, horiz., Bement.  
Bulldozer, No. 1 Williams-White.  
Forming press, 20-ton hydraulic.

Grinder, plowshare, No. 35.  
Hammer, 250 lb. Bell, steam.  
Hammer, 40 lb. Bradley, helve.

## SECOND-HAND MACHINERY

### FOR SALE BY

**McCoy-Brandt Machinery Company**

**Office and Warehouse, 216-218 Penn Ave., Pittsburgh, Pa.**

Good Used and New Equipment.

### ELECTRIC TRAVELING CRANES.

20 ton Browning trolley, 5 ton aux.  
hoist, 564" ga. (new).

20 ton Shaw 56' 10" span, 110 v., d. c.

10 ton P. & H., 48' span, 110 v., d. c.

10 ton Case, 58' 3" span, 220 v., d. c.  
2 ton hand, 22' span, single or dbl.  
trolley, (8).

### GRINDERS.

No. 10 Brown & Sharpe pl., belted.  
No. 12 B. & S., universal and tool.

Grindstone, 34x5", belt driven.

### LATHES.

24"x10' Amer. latest hi-duty, (new).

25"x14' Sidney, d. b. g., (new).

19"x10' Sidney, d. b. g., (new).

15"x 6' Sidney, s. b. g., cone driven,

taper attach., (new).

17"x 8' Sidney, d. b. g., (new).

18"x10' South Bend, cone dr. (new).

16"x 8' South Bend, cone dr. (new).

15"x 7' South Bend, cone dr. (new).

15"x 5' South Bend, cone dr. (new).

13"x 6' South Bend, cone dr. (new).

12"x 5' Spd. lathe, tool holder & c. s.

### MILLING MACHINES.

No. 4 Garvin plain, table 6x30", cone  
driven.

No. 24 Oesterlein universal.

No. 2 Cincinnati univ., cone driven.

No. 1 Bickett horiz., (new).

No. 0 Bickett vertical miller and  
profiler (new).

Newton vertical, rotary table.

### PRESSES AND BRAKES.

No. 11 Perkins (trimming) bed 24x30, 4" str., wt. 16,000 lbs., with side shear.

No. 225 Adriance (punch) 2" stroke, geared, wt. 7,000 lbs.

No. 19 Avery, o. b. i., 2" strokes; equal No. 19 Bliss.

P-5 Ferracute, 1 1/2" stroke; weight 8600 lbs.

No. 4 Stiles, 1 1/2" stroke; weight 5000 lbs.

13' 6" Garrison brake or press, cap. 1/2".

8' Robinson hand power brake.

### PUNCHES AND SHEARS.

Sgl. 48" thrt., cap. 3x1 1/2", Providence.

Single 8" throat, cap. 1/2x1 1/2", belted,

Cleveland.

Single 15" throat, cap. 1/2x1 1/2", (hand)

New Doty.

Double 12" blades, bar shear, cap.

2" square cruc.

Universal plate shear, 18" blades,

cap. 1/2", Cleveland, belted.

Double, 15" thrt., cap. 1/2x1 1/2", Fisher.

Plate shear, No. 3 Lewis, cap. 3-16",  
26" blades.

Guillotine shear, cap. 1/2x17", Fisher.

Guillotine shear, No. 0 H. & J., 6"

and 7" blades.

Butterfly shear, 3 blades, 8" long;

rapid-cutting.

Squaring shear, 120", cap. 3-16".

Circle shear, No. 20 P. S. & W., cap.

20 gauge.

### MISCELLANEOUS.

Air drill, Chicago No. 1, chuck.

Bolt cutter, 1 1/2" "Morgan", dies  
5-16" to 1 1/2".

Bolt cutter, 2" Acme, single head,  
dies 1/2 to 2".

Bulldozer, No. 29-U W-W., 26" str.

Drill press, 20" Silver, hand or pwr.  
feeds (new) 6.

Drill press, 14" Excelsior, (new) 6.

Drill press, 20" sliding hd., old.

Gas engine, 12 h. p. New Era, horiz.

Gas engine, 30 h. p. Struthers-W.,  
1 cylinder horizontal.

Gas engine, 125 h. p. Bessemer, 2  
cylinder horizontal.

Hack saw, No. 2 Robertson, 5x5".

Hack saw, No. 2 and 4 Economy,  
cap. 6x6 and 8x8" (new).

Hack saw, Peerless 6x6 (new).

Pipe machine, 2" Bignall & Keeler.

Pipe machine, 4" Saunders.

Pipe mch., 6" old style, belted, dies.

Pipe machine, 6" Forbes, hand, dies.

Pipe machine, 8" E. C. & B.

Planer, 74"x52"x24' Pond, single hd.,

(old, cheap).

Planer, 30"x30"x8' Gale, 1 head.

Planer, 22"x22"x4' 9" Brettel, sgl. hd.

Planer, 22"x22"x4' Pond, single hd.

Radial, 3 1/2' Canedy, cone dr., (new).

Radial, 3 1/2' Bickford, pl., cone dr.

Radial, 4 1/2' full universal, cone dr.

Radial, Fosdick, 24".

Rotary planer, 36" Cleve., belt dr.

Saw, cold, 27" Q. & C., cap. 15" beam;  
or 8" rounds.

Saw, cold, 26" Newton, belt driven.

Saw, No. 2 Thompson, metal jig.

Shaper, 18" Steptoe crank, with c. s.

Shapers, 24", 18", 16" Barker, (new).

Straightening and bending machine,  
cap. 15" beams.

Thread rollers, 3" Waterbury-F.

Turret lathe, No. 4 J. & L., hand.



## SECOND-HAND MACHINERY

### FOR SALE BY

**Brown-McDonald Machinery Co., 2323 N. 9th St., St. Louis, Mo.**

#### LATHES.

13"x 6' South Bend, h. s., compound rest, new	290.00
15"x 8' South Bend, h. s., compound rest, new	390.00
16"x 8' South Bend, h. s., compound rest, new	470.00
18"x 10' South Bend, h. s., compound rest, new	620.00
14"x 8' American, g. c. g., h. s., compound rest	575.00
20"x 8' Oakley, d. b. g., h. s., comp. rest, not screw cutting, (4), each	550.00
38"x14' Fitchburg, s. s., compound rest	1500.00
12" Warner & Swasey speed lathe	40.00
14" Warner & Swasey, turret	250.00
14" Pierce, turret, cap. 1", new	360.00

#### DRILLING MACHINES.

No. 1 Burke, bench, sensitive, 1/2" cap., with chuck; new (3), each	17.50
No. 28 Western Chief, bench, sensitive, 1/2" cap.; new (2), each	25.00
14" Excelsior, sensitive, 1/2" cap.	57.50
20" Stover, square base, lever	60.00
20" Champion, sq. b., lever feed; new (3), each	100.00
20" Champion, sq. b., wheel and lever feed; new	115.00
20" Silver, square base, b. g., p. f., new	135.00
26" Aurora, sliding head, back geared and p. g. f.; new	325.00
24" Bickford, sliding head, wheel and lever feed	100.00
No. 101 Canedy-Otto radial, 3/4" arm, new	550.00

#### SHAPERS.

16" Milwaukee, back gear, new	725.00
20" Milwaukee, back gear, new	850.00
24" Milwaukee, back gear, new	1025.00
18" American, crank, back gear	550.00

#### SCREW MACHINES.

No. 2 Smurr & Kamen, cap. 1/2", new	425.00
No. 4 Smurr & Kamen, grd. friction head, p. f. to tur., cap. 1 1/4", new	800.00

#### SHEARS.

No. 11-A Badger, alligator, cap. 1/2"x3	65.00
No. 15-A Niagara ring and circle shear, head only	75.00
No. 43 Beloit, 1/2" cap. single geared splitting shear	175.00

#### SAWS.

Hack, 6x6 Peerless, high speed new	142.50
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#### BRAKES.

6' Robinson, cap. 20 ga.; (2), each	100.00
8' Robinson cornice brake	155.00
8' Robinson, heavy type, power	300.00

#### COMPRESSORS.

6x6x6 Laidlaw-Dunn-Gordon, steam; cap. 30 cu. ft.	125.00
10x10 Star, vertical, with engine, double acting; cap. 120 cu. ft.	450.00

#### MISCELLANEOUS.

Air hoist and trolley, 12x48, vertical	60.00
Blower, No. 2 Root rotary, with engine	250.00
Blower, No. 5 Root rotary	350.00
Blower, No. 9 Sturtevant	100.00
Blower, pressure, No. 6 Sturtevant	60.00
Chuck, Simplex, 12" 4-jaw independent; new	35.00
Chuck, Sweetland, 4", 3-jaw scroll, rev. j., new	21.00
Chuck, 10" 4-jaw, Sweetland ind., new	30.00
Chucks, 8" 4-jaw, Sweetland ind., (2) new, each	26.00
Hammer, helve, 60 lb. Knowlton	250.00
Milling machine, No. 6 Whitney, hand	175.00
Pipe machine, Borden, belted; cap. 2"	175.00
Pipe Cutter, No. 5 Fox, cap. 2 1/2" O. D.	75.00
Press, No. 2 Bauroth, inclinable, wt. 1000 lb., new	215.00
Press, No. 3 L. & J. inclinable, wt. 2000 lb., new	315.00
Press, No. 4 L. & J. inclinable, wt. 3000 lb., new	440.00
Punch & shear, No. 1B New Doty, cap. 1 1/2 in 1/4	400.00

## SECOND-HAND MACHINERY

### FOR SALE BY

Frank Toomey, Inc.,

127-131 N. Third St., Philadelphia, Pa.

New and Used Machine Tools.

### LATHES.

- 13"x 7'6" new Carroll-Jamieson.
- 14"x 6' new Carroll-Jamieson, quick change.
- 14"x 6' Reed.
- 15"x 6' new Sidney, d. b. g., quick change, swing 17" over shears.
- 16"x 6' Hamilton, turret on shears.
- 16"x 6' Reed.
- 17"x 8' new National, quick change.
- 17"x 8' new Sidney, d. b. g., quick change, swing 19" over shear.
- 18"x 8' Springfield.
- 19"x 8' new Sidney, d. b. g., quick change, swing 21" over shears.
- 20"x10' Hamilton.
- 22"x20' Reed, blocked to 29".
- 24"x10' new Carroll Jamieson.
- 28"x13' Harrington.
- 32"x24' Fay & Scott, raising blocks to 53".

### SCREW MACHINES.

- 3"x36" Jones & Lamson.
- 2" Cleveland automatic.
- 24" Gisholt, motor drive.
- 14"x5' Lodge & Shipley, wire feed.

### DRILLING MACHINES.

- D-4 Colburn, high duty.
- 20" Rockford, high duty, (2).
- 36" new Superior, sliding head.
- 32" new Superior, sliding head.
- 28" new Superior, sliding head.
- 20" new Superior Hi-Speed.
- 20" new Superior.
- 16" new Superior Hi-Speed.

### PLANERS.

- 36"x36"x 8' Pond, two heads.
- 20"x30"x10' Bement, two heads.
- 24"x24"x 5' Pond, one head.

### SHAPERS.

- 14" new Steptoe.
- 15" Bement, traveling head.
- 16" American.
- 18" Barker.
- 20" new Steptoe.

### MILLING MACHINES.

- No. 3 Kempsmith new universal.
- No. 3 Kempsmith new plain.
- No. 2 Kempsmith new universal.
- No. 1 Kempsmith new universal.
- No. 1 1/2 new American plain.
- No. 0 Steptoe plain, b. g., pwr. fd.
- No. 0 Beaman & Smith vertical miller, table 24"x6'.

### GRINDERS.

- 10"x20" Bath universal.
- 8"x20" Landis plain.
- No. 2 new Grand Rapids universal pipe machine.

### PIPE MACHINES.

- 2" Saunders.
- 4" Saunders.
- 4" new Oster.
- 8" Saunders.

### HAMMERS.

- 2000 lb. Niles, double frame steam.
- 250 lb. new Little Giant, belt.
- 125 lb. Scranton, belt.
- 100 lb. new Little Giant, belt.
- 50 lb. new Little Giant, belt.
- 25 lb. new Little Giant, belt.

### PUNCHES AND PRESSES.

- 24" throat single end geared shear.
- 15" throat Industrial double end punch.
- 9" throat geared punch.
- No. 26 Niagara inclinable press.
- No. 5 Niagara arch press.
- No. 10 Badger State shear.
- No. 20 Excelsior shear.

### MISCELLANEOUS.

- Automatic threading lathe, 16"x10'.
- Broaching press, 30-ton Watson-Stillman.
- Gear cutters, 8" Dwight automatic, (4).
- Profilers, No. 3 Garvin, (2).

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Motch & Merryweather Machinery Company,**  
**711 Lakeside Av., N. W. Cleveland, Ohio**  
**Branches: Detroit, Cincinnati, Pittsburgh.**

#### AUTOMATICS.

2' Cleveland. No. 23 New Britain, chucking.  
 No. 22 New Britain, chucking. No. 33 New Britain, chucking.

#### BROACHING MACHINES.

No. 1 Lapointe. No. 2 Lapointe.

#### BORING MILLS.

72" Niles 4-wheel boring mill. 32" Warner & S. turret hd. vertical.

#### CENTERING MACHINES.

Whiton two spindle.

#### DRILLING MACHINES.

No. 2 Avey 2-spindle. 48" Betts upright.  
 20" Silver. 5' Fosdick & Hollaway radial.  
 26" Hoefer upright. 6' Fosdick radial.

#### GEAR CUTTERS.

15" Gleason gear planer. 36"x9" Whiton.  
 36" Fellows gear shaper. 36"x9" Gould & Eberhardt.

#### GRINDERS.

No. 1 Cincinnati, cutter grinder. 6"x32" Norton.  
 No. 2 Brown & Sharpe, universal. 10"x30" Landis.  
 No. 2½ Bath, universal. 10"x50" Norton.  
 No. 4 Gardner disc grinder. 20"x1½" single wet tool.  
 No. 12 Gardner disc grinder. 24" double wet tool.  
 No. 18 Bryant grinder. Woods, cutter and tool.  
 No. 210 Heald wet grinder.

#### HAMMERS.

35 lb. W. & W. power tire welding. No. 3 Standard, 500 lb. belt drop.

#### KEYSEATERS.

No. 2 Mitts & Merrill. 18"x1½" Morton.

#### LATHES.

16"x 6' Lodge & Shipley, pat. hd. 18"x10' Monarch, q. c.  
 16"x 6' Harrington. 18"x12' Monarch, q. c.  
 16"x 8' Lodge & S., 3-step cone. 20"x 8' Bradford.  
 18"x 8' Lodge & Shipley, pat. hd. 20"x10' Reed.  
 16"x 8' LeBlond. 22"x10' Reed.  
 18"x 8' Bradford. 30"x14' Lodge & S., pat. hd.

#### MILLING MACHINES.

No. 1½ LeBlond plain. No. 10 Pratt & Whitney, hand.  
 No. 4 Cincinnati plain. Hendey, Lincoln type.  
 No. 7-H Becker, Lincoln type. U. S. hand miller.

#### PLANERS.

24"x24"x 8' Niles, one head. 30"x30"x 8' openside.  
 30"x30"x 8' Pond, one head. 38"x38"x 8' Flather, 2 heads.

#### PRESSES.

No. 2 Consolidated plain inclinable. No. 5 Stiles & Parker, blanking.

#### SAWS.

6" Milford hack saw. 7" Paragon high duty.  
 6" Atkins "Kwick-Kut." 12" Gust Wagner cold saw.

#### SCREW MACHINES.

2A Warner & Swasey. No. 10 3" Foster.  
 4½" Bardons & Oliver.

#### SHAPERS.

20" Queen City. 46" Hendey, traverse head.  
 24" Gould & Eberhardt.

#### TURRET LATHES.

16" Bardons & Oliver. 24" Gisholt.  
 22" Libbey.

#### MISCELLANEOUS.

Belt stopping machine, Builders Foundry.  
 Fly-wheel balancing machine, Rockford.  
 Variable speed countershaft, Reeves, small.

## SECOND-HAND MACHINERY

### FOR SALE BY

**W. F. Davis Machine Tool Company**

**549 Washington Blvd., Chicago**  
**Singer Bldg., New York City**

**Leader News Building, Cleveland**  
**Union Cent. Life Bldg., Cincinnati**

Write or wire our nearest office for quotations.

This is only a partial list of available machines.

#### BORING MACHINES—VERTICAL.

32" Bullards, 1 turret head, (2).  
New 36" Gisholt, one swivel turret head, motor driven.

42" Baush, 2 swivel heads, q. c.

New 8' Bickford, 90" table, 2 swivel heads, Feb. delivery.

10' Niles, 2 swivel heads, (2).

#### BORING MACHINES—HORIZONTAL.

Niles 2 1/2" bar, knee type.

No. 2 Barrett, 5" bar.

London, 6" bar.

Beaman & Smith, 7" spindle.

#### BULLDOZERS.

No. 9 Williams & White, belt drive.

No. 12 Ajax, single pulley drive.

No. 23 Williams & W., belt dr., (2).

No. 26 Williams & White, belt dr.

No. 29-U Williams & W., arranged for motor drive.

#### CRANES—TRAVELING.

10 t. Maris, 55' span, hand operated.

10 ton electric, 47' span, 25' lift, 3 motors, (2).

10 ton P. & H. electric, 72' span, (3).

10 ton Niles, 72' span.

10 ton Whiting, 3 motors, 24' span.

50 ton Niles, 61' span.

#### CRANES—LOCOMOTIVE.

10-15 t. McMyler broad gauge, steam locomotives, 60' boom, bucket, 3 drums, (3).

15 t. Industrial locomotive, 8 wheel, 40' boom, bucket.

15 ton Brown Hoist locomotive, 36' boom, bucket, 8 wheels.

20 ton Orton & Steinbrenner steam locomotive, 8 wheel, double drum, 37' boom, bucket.

#### CUTTING-OFF MACHINES.

New 4 1/2" Davis.

Davis 4 1/2", (30).

4 1/2" Williams, (10).

New 6" Davis, (2).

#### DRILLING MACHINES—RADIAL.

New 3' Mueller, speed box drive, December delivery, (6).

New 3' Am., sens., tapping att., (3).

4' Mueller, pl., speed box drive, (2).

4 1/2' full universal, cone drive.

New 5' Western plain, with motor.

New 5' Niles universal, with motor.

5' Fosdick, plain.

New 5' Mueller, speed box drive, December delivery, (5).

6' Pond, cone drive.

New 6' Triumph motor dr., Dec. del.

#### DRILLING MACHINES—HEAVY DUTY.

New No. 2 Colburn, (2).

No. 14 Colburn, 24" swing, cap. 2" in solid steel, (3).

No. 310 Baker, single pulley drive, late type, (4).

#### DRILLING MACHINES—SLIDING HEAD.

New 24" Barnes drills and tap., (2).

New 24" Barnes drills, (5).

New 28" Sibley, (5).

#### DRILLING MACHINES—MULTIPLE SPINDLE.

4 spindle 20" Barnes, all geared.

No. 5 Fox 12 spindle, 1" capacity.

Baush 12 spindle, capacity 1 1/2", 30" circle, motor driven.

#### GEAR CUTTING MACHINES.

New No. 3 Bickett gear rack planer, delivery 60 days.

No. 3 Brown & Sharpe auto. gear cutter, spur, (5).

No. 4 Brown & Sharpe latest model, cap. 48"x10", (2).

New 6" Standard gear cutter, spur

15" Gleason bevel gear planer.

20" Grant-Lees gear hobber, bevel, spur and spiral attachment.

24" Becker Brainard.

24" Fellows gear shaper.

New 30" Flather, solid pattern, (2).

36" Fellows gear shapers, (3).

GRINDERS—UNIVERSAL FOR

New No. 190 Wells, (6).

No. 1 Cincinnati, (4).

New Premier universal.

New Wilmarth & M., style B. K.

New Walker No. 1, outfit B.

New No. 1 Wood universal.

CUTTERS, DRILLS, REAMERS.

New No. 2 Wood universal, (5).

New Walker No. 2, outfit K., capacity, 9"x28".

New No. 2 Oesterlein universal, (2).

New LeBlond, (7).

## SECOND-HAND MACHINERY

### W. F. Davis Machine Tool Company—Continued.

#### GRINDERS—CYLINDRICAL—PLAIN.

New 8x18" Modern self-cont., (2).  
 New 8x30" Modern self-cont., (3).  
 New 12x24" Modern self-cont., (2).  
 12x36" Modern self-contained, (6).  
 12x42" Landis self-contained, (2).

#### GRINDERS—CYLINDRICAL—UNIVERSAL.

New No. 2 Bath, 9x20", (2).  
 No. 2 new Walker, 9x26".  
 New 10x36" No. 2 Bath.  
 New Thompson, 10x36".  
 12x48" Modern self-contained, (5).  
 New 10x50" Norton, Oct. del., (7).  
 14x50" Norton.  
 New 10x72" Norton, plain.  
 12x36" Springfield.  
 12x40" No. 3 Brown & Sharpe.  
 12x42" Landis.  
 No. 4 Cincinnati, capacity 12x72".

#### GRINDERS—INTERNAL.

New No. 6 Modern, cap. 10x10".  
 No. 70 Heald.

#### GRINDERS—CYLINDRICAL.

No. 60 Heald, single pulley drive.

#### GRINDERS—PROFILE.

New Cleveland.

Fisher profile grinders, (5).

#### GRINDERS—SURFACE.

New No. 1 Wilmarth & Morman.  
 New No. 1 Walker's complete.  
 New No. 2 American, with Walker  
 No. 1 plain flat mag. chucks, (2).  
 3' Pratt & Whitney vert., magnetic  
 chuck.

#### HAMMERS—BOARD LIFT, DROP.

No. 4 Standard Mch. Co., 400 lbs.  
 E. W. Bliss, 800 lbs.

1500 lb. Toledo.

#### HAMMERS—STEAM, FORGING.

450 lb. Bell.  
 800 lb. Niles, single frame.  
 3,500 lbs. Chambersburg, stm.dr., (2).

5,000 lbs. Chambersburg, stm.dr., (2).  
 7,000 lbs. Morgan, special double  
 stand.

#### KEYSEATERS.

New No. 1 Davis, (2).  
 New No. 2 Davis.  
 No. 2 Mitts & Merrill.

Colburn, 4" capacity, 43" stroke.  
 No. 2 Knowles, 60" stroke.

#### LATHES—MANUFACTURING, NOT SCREW CUTTING.

New No. 3 Hardinge, bench, (2).  
 16"x8" Fairbanks-M., hvy. duty, (3).  
 New Simplex 16"x8", (70).  
 Reed-Prentice shell lathes, for 4" or  
 18 lb. American shells, (14).

25" Barrett hvy. duty boring mill, (2).  
 20"x10" Hindman, high duty, (50).  
 36"x20" heavy duty N.-B.-P. pro-  
 jectile boring, motor driven, al-  
 most new, (7).

#### LATHES—ENGINE.

New 14"x6" Bradford q. c., (3).  
 New 15"x6" Rockford, (14).  
 New 14"x6" Hendey, geared head.  
 New 16"x6" Cleveland tool room  
 lathes, complete equipment, (3).  
 New 16"x8" Bradford, q. c., (4).  
 New 17"x8" National, q. c. gears.  
 New 17"x8" LeBlond, pan bed, quick  
 change gears, (12).  
 16"x10" Hendey, q. c. g. 14" chuck.  
 New 20"x10" Bradford, q. c., (5).  
 New 20"x10" Cleveland, geared hd.  
 New 20"x12" Bradford, qck. ch., (3).  
 New 21"x10" Porter, s. b. g., (19).  
 22"x10" Putnam, oil pan, pump, (9).  
 New 24"x10" Bradford, quick change.  
 New 24"x12" Bradford, qck. ch., (5).  
 New 24"x12" American.  
 24"x14" American, quick chg., (3).

24"x22" Bullard, triple grd. taper att.  
 New 26x48"x12" McCabe dbl. spdl.  
 New 26x48"x22" McCabe dbl. spdl.  
 New 28"x12" Conradson, duplex hel-  
 ical drive, screw cutting type, (8).  
 New 30"x14" American d. b. g., q. c.  
 30"x14" L. & S., sgl. pulley dr., q. c.  
 New 32"x12" Pittsburgh pattern.  
 New 36"x24" Putnam, triple grd., (8).  
 New 42"x24" triple geared Houston-  
 Stanwood, heavy duty.  
 42"x28" Hamilton, triple grd., quick  
 change, raising blocks to 54".  
 50"x24" Prentiss.  
 New 66"x46" Putnam, triple geared,  
 face plate drive, 5 step cone, 64"  
 belt, October delivery.  
 71"x20" Fifield, triple geared.  
 84"x18" Special boring lathe.

#### LATHES—TURRET.

New 21" Gisholt H-21, (8).  
 New 24" Gisholt I-24, (2).  
 2"x24" Jones & Lamson, (5).  
 New 18" Libby.

24" Libby, universal facing head,  
 3-jaw chuck, (3).  
 20" Steinle, almost new.  
 6-A Potter & Johnston, (18).

(Continued on next page)

## SECOND-HAND MACHINERY

### W. F. Davis Machine Tool Company—Continued.

#### MILLING MACHINES—KNEE TYPE, UNIVERSAL.

- |                                   |  |
|-----------------------------------|--|
| No. 2 Kempsmith, vertical attach. | No. 3 Cincinnati full universal.               |
| No. 2 Kempsmith, 13" dividing hd. | No. 3-H LeBlond, heavy duty, almost new.       |
| New No. 2 Rockford, high power.   | No. 25 Oesterlein.                             |
| New No. 2 Garvin, (2).            | New No. 34 Oesterlein heavy duty, latest type. |
| No. 2 LeBlond.                    |  |
| New No. 3 Owen, (10).             |  |

#### MILLING MACHINES—KNEE TYPE, PLAIN.

- |                                  |  |
|----------------------------------|--|
| New No. 0 Rockford, (9).         | No. 2 Kempsmith, (2).                          |
| New No. 1 Kempsmith, (2).        | New No. 2 Couradson, single pulley drive, (5). |
| New No. 1½ American, b. g., (2). | New No. 3-H LeBlond, (4).                      |
| New No. 2 Rockford, (2).         | New No. 3 Owen, (10).                          |
| New No. 2 Owen, Nov. del., (10). | New No. 4 LeBlond.                             |
| No. 3 LeBlond.                   |  |

#### MILLING MACHINES—HAND.

- |  |   |
|--|---|
| New No. 1 Rockford, without column, (3). | New No. 3 Rockford, on col., (2).               |
| New No. 2 Rockford, on col. (3).         | New No. 3 Rockford, on column, power feed, (3). |

#### MILLING MACHINES—VERTICAL.

- |                           |  |
|---------------------------|--|
| New No. 0 Bickett.        | New No. 5-B Becker, rotary tbl., (3).                      |
| No. 3 Brown & Sharpe.     | Newton vertical, continuous, motor driven, for shell work. |
| New No. 4-B. Becker, (2). |  |

#### MILLING MACHINES—PLANER TYPE.

- |                                |   |
|--------------------------------|---|
| No. 2 Beaman & Smith.          | 30"x30"x8" Ingersoll No. 928, single spindle, with motor. |
| Ingersoll slab, 16"x48" cap.   |   |
| New 17"x5" Eynon, planer type. |   |

#### MILLING MACHINES—LINCOLN TYPE.

- |   |  |
|---|--|
| New No. 1 Gooley & Edlund, Briggs type. | New No. 1 American, (3).               |
|   | New Sellers auto., quick return, (18). |

#### PLANERS.

- |   |  |
|---|--|
| New 24x24"x6" Powell, single head.                                | 48x48"x12" Scott, heavy type, milling attachment on rail.    |
| 26x26"x10" Gray, 1 head.  | 50x50"x16" Pond, 2 heads on rail.                            |
| 30x30"x8" Gray, 1 head.   | 52x48"x15" Betts, 2 heads.                                   |
| 36x36"x10" American, 2 heads.                                     | 60x60"x20" Pond, motor driven, 4 heads, very good condition. |
| 36" Rotary planer, motor driven.                                  | 72x56"x16" Gray, 4 heads, A-1 condition.                     |
| 36x36"x8" Gray, 1 head.   | 72x60"x14" Smith-Globe, 2 swivel heads.                      |
| 40x40"x11" Niles, 4 heads.  | 72x72"x20" McKechrim & Bertram, 4 heads.                     |
| 42x42"x12" Butler, high speed, 3 hds. almost new.                 |  |
| 44x44"x12" Cleveland openside, 3 heads, arranged for motor drive. |  |
| 48"x12" Pedrick openside, 1 head.                                 |  |

#### SCREW MACHINES—HAND.

- |  |  |
|--|--|
| New No. 2 Foster, geared friction head, (4).                                     |  |
| New No. 4 Foster, geared friction head, power feed to turret slide.              |  |
| New No. 5 Foster, all geared, power feed to turret slide, (2).                   |  |
| New No. 5 Foster, all geared head, power feed to turret, power cr. fd., (3).     |  |
| New No. 6 Foster, geared friction hd., power feed to turret, pwr. cr. fd., (2).  |  |
| New No. 7 Foster, geared friction hd., power feed to turret, pwr. cr. fd., (5).  |  |
| New No. 10 Foster, geared friction hd., power feed to turret, pwr. cr. fd., (2). |  |
| New 2½" Dreses, f. g. b., power feed, (2).                                       |  |

#### SCREW MACHINES—AUTOMATIC.

- |  |   |
|--|---|
| New 8" Cleveland, model A, (2).                  | New 2½" Gridley, multiple spindle, belt driven. |
| New 1½" Gridley, mult. sp., belt dr.             | New 3½" Gridley, sgl. sp., belt dr.             |
| New 14" Gridley, multiple sp., belt driven (2).  | No. 0 Brown & Sharpe, (2).                      |
| New 14" Gridley, multiple sp., belt driven, (2). | No. 2-G Brown & Sharpe.                         |
|  | No. 515 National Acme.                          |

#### SHAPERS.

- |                            |   |
|----------------------------|---|
| New 16" Springfield.       | New 24" Potter & Johnston, univ. rotary table, (2). |
| 16" motor driven Rockford. | 25" Springfield.                                    |
| New Barker 24", (5).       | 30" Morton, draw cut, (2).                          |
| New 24" Milwaukee, (2).    |   |

#### SLOTTERS.

- |  |  |
|--|--|
| New 8½" Betts heavy model vertical geared crank slotter. |  |
|--|--|

## SECOND-HAND MACHINERY

### FOR SALE BY

Stocker-Rumely-Wacha Co.,

117-121 N. Jefferson St., Chicago

Immediate Delivery.

#### DRILLING MACHINES.

- |  |                                    |
|--|------------------------------------|
| 20" Mechanics.                                 | Four No. 310 Baker heavy duty.     |
| 22½" W. F. & J. Barnes, b. g., p. f.           | 3-spindle Rockford.                |
| 30" Lodge & Davis, s. h., b. g., p. f.         | 4-spindle Rockford.                |
| 34" Hamilton plain radial, tapping attachment. | 4-spindle Washburn, with power fd. |
| 4" Mueller plain radial.                       | 4-spindle Allen.                   |
|  | No. 11 Pratt & W., 10 spindles.    |

#### GEAR CUTTERS.

- |                                 |                                    |
|---------------------------------|------------------------------------|
| 24"x7" G. & E., spur gears.     | 36"x9" G. & E., spur and bevel.    |
| No. 13, B. & S., spur gears.    | 36" Walcott, spur gears.           |
| 30"x9" G. & E., spur and bevel. | No. 1 Schuchardt & S. gear hobber. |

#### GRINDERS.

- |  |                               |
|--|-------------------------------|
| No. 1 Cincinnati, univ. tool & cutter. | No. 21 Landis plain.          |
| No. 2 Woods, tool & cutter.            | No. 1 Gardner disc.           |
| Brainard cutter.                       | No. 24 Gardner disc.          |
| Leland universal, with power feed.     | No. 6-A Diamond universal.    |
| No. 2 Landis universal                 | 10"x36" Landis, plain, (new). |

#### LATHES.

- |  |  |
|--|--|
| 14"x6" Rockford, c. r.                                 | 21"x12" New Haven, c. r.                                 |
| 15"x6" Rockford Tool Co., c. r.                        | 36"x18" Schumacher & Boye, t. b. g., g. c. g.            |
| 16"x8" Bradford, c. r.                                 | 36"x20" American, t. b. g.                               |
| 18"x6" Bradford, c. r., taper attach.                  | 38"x16" Fifield.   |
| 18"x8" Lodge & S., pat. head, c. r., taper attachment. | 42"x28" Hamilton, t. b. g., raising blocks to swing 54". |
| 20"x14" Blaisdell, c. r.                               |  |

#### PLANERS.

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 24"x24"x6" American, one head.  | 39"x39"x12" New Haven, one head.  |
| 26"x26"x6" Gray, one head.      | 48"x48"x10" Woodward & P., 2 hds. |
| 26"x26"x8" Pease, one head.     | 50"x50"x18" New Haven, two heads, |
| 30"x30"x8" Woodward & P., 1 hd. | 2 extension heads.                |
| 36"x36"x14" Sellers, 1 head.    |                                   |

#### SCREW MACHINES.

- No. 1 Warner & Swasey, plain head.  
 No. 2 P. & W., friction head.  
 No. 2 Foster, plain head, a. c. and w. f.  
 No. 3 Bardons & Oliver, plain head, a. c. and w. f.  
 No. 4 Pearson, friction head, a. c. and w. f.  
 No. 5 Foster, geared friction head, auto. chuck, power feed to turret slide and power feed to cross slide.  
 No. 5 Foster, all geared head, auto. chuck and w. f., p. f. to turret slide.  
 14" Gridley, 4-spindle automatic.  
 34" Gridley, 1-spindle automatic.

#### TURRET LATHES.

- |                                   |  |
|-----------------------------------|--|
| No. 2 Foster-Kimball, plain head. | 2"x24" J. & L., cone head.                       |
| No. 22 Garvin, plain head.        | 24" Gisholt, 4½" spindle hole, taper attachment. |
| 16" Lodge & Davis, back geared.   | No. 3-A Warner & Swasey, bar att.                |
| 16" Warner & Swasey, friction hd. |  |

#### PUNCHES AND PRESSES.

- No. 74½ Bliss, stroke side, geared.  
 Blake & Johnson, embossing.  
 No. 4 Long & Allstatter single end punch & shear, 1¼", 12" throat (new).  
 No. 4 Long & Allstatter sgl. end punch & shear, 1¼"x1½", 18" throat (new).

#### MISCELLANEOUS.

- Gas engine, horizontal, 6 h. p. Fairbanks-Morse.  
 Gas engine, 2-cylinder vertical, 20 h. p. Nash.  
 Gas hardening furnace, Industrial, with blower and pyrometer.  
 Keyseater, No. 00 Baker.  
 Miller, plain, No. 2 Brown & Sharpe.  
 Miller, vertical, No. 3 Cincinnati.  
 Thread miller, 6"x48" P. & W.  
 Turret lathe, vertical, 24" Bullard, turret head and 1 side head.

## SECOND-HAND MACHINERY

### FOR SALE BY

Simmons Machine Co., Inc.

Main Office and Warehouse, 981-985 Broadway, Albany, N. Y.

#### Branch Offices:

1001 Singer Building, N. Y. City, 358 Ellicott Sq., Buffalo, N. Y.

#### GRINDERS.

New No. 3 Landis universal.  
New No. 1½ Landis universal.  
New Premier tool and cutter, (25).  
LeBlond univ. tool and cutter.  
Style BX Wilmarth & Morman cutter & tool, drill grinding att.  
6"x32" Norton plain, pwr. fd., (9).

New 13"x40" No. 3 Modern univ., (2)  
No. 3 Landis univ., capacity 10"x36".  
16"x36" Bridgeport plain.  
6-C Diamond, 1 cup, 1 disc wheel.  
Ford-Smith, for grinding 3" shells.  
New Dumore electric tool post, with equipment A, (12).

#### MILLING MACHINES.

New 10" Simmons universal index centers, (25).  
Slightly used No. 2 Cincinnati univ.  
New No. 2A Garvin universal.  
No. 2 Kearney-Trecker plain.  
Used No. 2 Kemp Smith universal.

No. 2 American universal.  
No. 4 Garvin plain, table 14½"x56".  
Garvin plain, table 30"x73".  
No. 5 Becker vertical, table 48x13".  
New No. 1 Kemp Smith, vert. attach.  
New No. 2 Kemp Smith, vert. att.

#### PLANERS.

24"x24"x6" Powell, one head.  
24"x24"x6" Lathe-Morse, one hd.  
24"x24"x7" New Haven, one head.  
24"x24"x8" Putnam, one head.  
25"x25"x6" Sellers, one head, (5).  
28"x25"x6" D. W. Pond, 1 head.  
30"x30"x8" Pond, one head.  
30"x30"x10" Sellers, 1 hd., worm dr.

30"x30"x8" Wheeler, one head, good as new.  
30"x30"x12" Detrick-Harvey, 3 hds.  
36"x36"x20" Putnam, 2 heads.  
36"-68x36x12" New Haven extension, 2 heads.  
42"x42"x10" Pond, 1 head.

#### LATHES.

New 13"x6" Filsmith, tool room, taper att., draw-in chuck, pan.  
New 13"x5" Lancaster, (6).  
14"x6" Reed.  
New 15"x6" Sidney, tool room, q. c., taper and relieving att., (2).  
16"x8" Draper.  
16"x8" Lodge & Shipley, q. c.  
16"x8" Putnam, (2).  
18"x8" Porter, (3).  
18"x8" Pond.  
New 19"x8" Sidney, q. c., d. b. g., (4).  
20"x8" Prentice, grd. hd., sgl. pulley drive, q. c., (2).  
20"x8" LeBlond.  
20"x6" Reed, (2).

20"x8" Reed.  
20"x8" Perkins, pan and pump, (8).  
20"x8" Harrington.  
24"x8" Reed.  
24"x8" Reed, (2).  
26"x18" Bullard.  
26"x13" Bullard.  
26"x18" Putnam, raising blks. to 60".  
26"x6" Premier hvy., 18" bet. centers.  
30"x 8" Fitchburg.  
32"x12" Draper.  
36"x16" Bement, c. r., p. c. f., used.  
40"x12" Pond, triple geared.  
40"x26" Prentice, raising blks. to 40".  
Large pit lathe, with 9" internal drive face plate.

#### DRILLING MACHINES.

6" Pond plain radial.  
Avery sensitive.  
Burnham, 2-spindle sensitive.  
Burnham, 3-spindle sensitive.  
5" Lodge & Davis radial.  
Rockford heavy duty.  
No. 310 Baker heavy duty.  
New 3½" No. 50 C-Otto post radial.

New 3½" No. 51 C-Otto post radial.  
20" No. 36 Canedy-Otto, stationary head, power feed, b. g.  
20" No. 35 Canedy-O., sta. hd., (6).  
36" Aurora, sliding head.  
40" Industrial, stationary head, (2).  
Rockford 6-spindle, mfg. type.  
New Dumore electric bench drill.

#### SHAPERS AND SLOTTERS.

12" Bement, traveling head.  
New 16" Smith-Mills, back geared.  
New 20" Cleveland, bk. grd., (6).

New 24" Cincinnati, high duty.  
24" Bement slotter.  
15" Hendey shaper.

#### AUTOMATICS.

National Acme 4-spd., ¼" capacity.  
1" National Acme 4-spindle.  
No. 54 National Acme, ½" capacity.  
No. 55 National Acme, 1½" cap., (2).  
2" Cleveland, 5-hole turret, (2).

24" Cleveland, 5-hole turret.  
Slightly used 2½" Gridley sgl. spdl.  
24" Gridley sgl. spdl., motor dr., (2).  
34" Gridley sgl. spdl., motor driven.  
44" Gridley sgl. spdl., motor driven.



## SECOND-HAND MACHINERY

### Simmons Machine Co., Inc.—Continued.

#### TURRET LATHES AND SCREW MACHINES.

20" Potter & Johnston semi-automatic turret lathe.  
20"x8" Bridgeport turret lathe.  
34"x36" Jones & Lamson chucking lathes, cone type, (2).  
New No. 2 Leisy-Patton hand screw machine, 1" capacity.

24" Gisholt turret lathe.  
Pratt & Whitney turret screw machines, 18" capacity, 16" swing.  
No. 0 Brown & S. wire fd. screw mch.  
24x8 Bullard turret lathes, (2).  
Conradson 24" turret lathe.

#### MISCELLANEOUS.

Bolt cutter, 2" National.  
Pipe machine, 8" Eaton, Cole & B.  
Write for our complete list.

Pipe machine, 8" Williams.  
Punch & s., No. 4 L. & A., sgl. end.  
What have you to offer?

### FOR SALE BY

The Strong, Carlisle & Hammond Co., Cleveland, O., Detroit, Mich.

#### ENGINE LATHES.

20"x8" New Haven, comp. rest.  
22"x8" Flather, c. r., standard.  
8" Hardinge Bros. precision lathe.  
16"x8" Perkins, p. r.

16"x8" Lodge & Shipley, comp. rest.  
16"x8" Prentice, compound, q. c. g., geared head.  
24"x10" Schumacher & Boye, q. c.

#### TURRET LATHES.

18" Lodge & Davis, gear feed head, automatic chuck.  
14" Lodge & Davis, plain head.  
28" Gisholt, with t. a., motor driven.

No. 1 Warner & S. hol. hex. turret.  
24" Davis turret boring & chucking lathe, with vert. forming attach.  
24"x12" Schumacher & B., q. c.

#### DRILLING MACHINES.

14" Knight drilling & milling, circular milling attachment.  
12" Rockford upright.  
36" Prentice Bros. standard sl. hd.  
22" sliding head, w. & l. feed.  
10-sp. Quint turret drill.  
5-sp. Detroit, semi-automatic.

6-sp. Woodward & Rogers, sensitive.  
4-sp. Garvin, sensitive.  
60" Alfred Box plain radial.  
No. 175-5' arm Cincinnati-Bickford wall type plain radial.  
14" Taylor & F. upright sensitive.  
3' American hi-spd. sen. radial, (2).

#### SCREW MACHINES.

2" Cleveland full automatic.  
No. 60 Brown & Sharpe automatic.  
1" Hartford full automatic.  
2" Hartford full automatic.  
No. 52 four-spindle National Acme.  
No. 53 four-spindle National Acme.  
No. 54 four-spindle National Acme.

No. 22 New Britain multiple spindle automatic.  
No. 23 New Britain multiple spindle automatic, (2).  
No. 33 New Britain multiple spindle automatic, (2).  
No. 2 Warner & S., pl. hd., with p. f.

#### MILLING MACHINES.

Special horizontal slab miller, 66"x45" movable heads.

#### PLANERS.

27"x24"x 7' New Haven.

20"x30"x10' Cincinnati.

#### GRINDERS.

Gisholt tool grinder.  
Warner & Swasey cock grinder.  
20" Whitney wet grinder.  
Type "DE" Hisey-Wolf internal.

Greenfield univ. cutter & reamer, (2).  
Wells bench cutter and reamer.  
No. 60 Heald cylinder grinder.

#### HAMMERS.

Coffman, post, power dr., 25 lbs., c. s.  
100 lb. Cady, belt drop, c. s.  
25 lb. Bradley, upright helve.

400 lb.-4 poppet Etna Machine Co. rope drop hammer.

#### RIVETERS.

1/2" Shuster, elastic rotary blow.  
1/16" Adt, elastic rotary blow.

114" throat Giant rivet spinning machine.

#### GEAR CUTTERS.

No. 2 Whiton automatic.

#### MISCELLANEOUS.

Bolt cutters, 1" Wells, h. & p., solid sp., and 1 1/2" Wells, solid die, sgl.  
Keyseater, Morton, draw stroke.

Keyseater, Mitts & Merrill, square frame.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Badger-Packard Mchy. Co., 133-139 W. Water St., Milwaukee, Wis.**

#### LATHES.

- |                               |   |
|-------------------------------|---|
| 11"x5' Star No. 30-P.         | 16"x8' LeBlond, 4-st. cone, a. b. g.        |
| 12"x4' Martin Fox.            | 16"x8' Flather, 4-st. cone, o. b. g., q. c. |
| 12"x5' Le Blond, back geared. | 20"x8' Walcott, single b. g.                |
| 13"x7' Shepard.               | 20"x10' Blaisdell, c. r., solid sp.         |

#### MISCELLANEOUS.

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| Grinder, 12x48 Modern.              | Keyseater, No. 1 Davis.              |
| Grinder, double disc, No. 26 Besly. | Pipe mch., No. 1 Merrill, complete   |
| Grinder, wet tool, 24x2' Milwaukee. | with c. s. 3" to 2" capacity.        |
| Grinder, cutter, Garvin.            | Planer, 26"x28"x6' Pond, one head on |
| Hack saw, No. 1 Racine high speed.  | cross rail.                          |
| Hammer, drop, 100 lbs.              | Punch press, No. 3 Rockford.         |
| Oven furnace, No. 1 Stewart, with   | Shaper, crank, 14" Steptoe.          |
| blower.                             |                                      |

### FOR SALE BY

**A. D. White Machinery Co., 108-114 N. Jefferson St., Chicago.**

#### PUNCH PRESSES AND PUNCHES AND SHEARS.

- |                             |                                       |
|-----------------------------|---------------------------------------|
| No. 29 Swaine, o. b. l.     | No. 204 Toledo overhanging press.     |
| No. 2 Walsh, o. b. l.       | No. 29 Bliss, gang, dbl. action.      |
| No. 21-H Crosby horn press. | 19" throat geared punch.              |
| No. 45 Crosby, open back.   | No. 380 Toledo slitting shear, 16 ga. |

#### DRILL PRESSES.

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| 28" Bickford, sliding head.       | 3-spd. American.                 |
| 30" Barnes, sliding head.         | 4-spd. Dwight Slate.             |
| 32" Bickford, sliding head.       | 8-spd. Valley City, No. 1 taper. |
| 1-spd. Henry & Wright high speed. | 12 spd. Bausch, No. 2 taper.     |

#### SCREW MACHINES.

- |                                 |                               |
|---------------------------------|-------------------------------|
| 3" LaVigne.                     | 3" Hartford. (3).             |
| 7-16" Cleveland, friction feed. | 1" Cleveland.                 |
| 1" Cleveland, friction feed.    | 1" LaVigne.                   |
| 1" Cleveland, friction feed.    | 1" Cleveland, semi-automatic. |
| 1" Cleveland, jigger feed.      | No. 2 Hercules, hand, new.    |

#### ENGINE LATHES.

- |                         |                    |
|-------------------------|--------------------|
| 10"x54" Davis.          | 28"x10' Fifield.   |
| 11"x 5' South Bend.     | 26"x25' Blaisdell. |
| 14"x 6' Monarch.        | 28"x25' Putnam.    |
| 16"x12' Beaman & Smith. | 30"x14' Blaisdell. |
| 24"x10' Putnam.         | 32"x14' Pond.      |

#### GRINDING MACHINES.

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| 18" Ransom, disc.                    | Springfield, dbl. wheel, water. |
| Yankee Style "B", drill.             | No. 2 Leland & F., water.       |
| 14" Norton, floor, (2).              | No. 38 Safety Emery Wheel Co.   |
| 14" Safety emery wheel, floor.       | plow grinder.                   |
| 2" No. 7 Sterling, floor.            | 10x30" Landis plain.            |
| 2" Springfield, double wheel, floor. |                                 |

#### MISCELLANEOUS.

- |   |                                     |
|---|-------------------------------------|
| Boring machine, car wheel, No. 55       | Miller, B. & S. No. 12, mfg., (2).  |
| Industrial.                             | Miller, slab, 22" Eynon-Ingersoll.  |
| Bolt cutters, 1 1/2 & 2" Acme, sgl. hd. | Miller, No. 2 Becker vertical.      |
| Blower, No. 3 Root.                     | Oil gas generator, No. 3 American.  |
| Die filing machine, Simplex.            | Planer, 18"x18" Whitcomb.           |
| Drill, 24' Fossdick, radial.            | Planer, 35"x35"x12" Niles, 2 heads. |
| Gas engine, 35 h. p. Columbus.          | Riveter, 3" Schuster.               |
| Hammers, 40 & 60 lb. Bradley, cu. hlv.  | Rivet spinner, 3" Grant.            |
| Hammer, 500-lb. Sandage.                | Saw, band, Williamson, tilting.     |
| Hobber, No. 000 Schuchardt & S.         | Saw, cold, Bryant, 1 1/2" dia. saw. |
| Keyseater, No. 2 Mitts & Merrill.       | Saw, cold, No. 54 Nutter-Barnes.    |
| Keyseater, 36" Morton portable.         | Shapers, new Kelly and Averbeck.    |
| Lathes, new, 14", 16" and 18".          |                                     |

## SECOND-HAND MACHINERY

### FOR SALE BY

Henry Prentiss & Company, Inc.,      Singer Bldg., New York

Formerly

Prentiss Tool & Supply Company

### BORING MACHINES.

37" Niles vertical, 2 heads,      |      36" Bullard vertical, 2 hds.

### DRILLING MACHINES.

24" Henry & Wright ball bearing, sensitive.	28" Blaisdell, sliding head.
4-spindle Woodward & Rogers.	36" Bickford plain radial.
4-spindle Harr.	54" Baush post radial.
5-spindle Reed.	No. 37 Natco, 18 spindles.
No. 25 Foote-Burt heavy duty.	10 spindle Gardam adjustable.
	No. 4 Quint turret.

### GRINDERS.

No. 5 Rivett on stand.	No. 6 Bryant internal.
12x60 Landis universal.	No. 200 Heald, piston ring.
12x30 Landis plain.	No. 11 Rivett, oscillating.
No. 2 Garvin hole grinder.	Greenfield universal cutter and tool.
6x32 Norton plain.	Pratt & Whitney, vertical surface.
10x50 Norton plain.	14x50 Norton plain.

### LATHES.

15"x8' Hamilton, plain rest, p. c. f., taper attachment.	18"x8' American, compound rest, quick change, taper attachment.
16"x8' Porter, compound rest, power cross feed.	20"x8' Lodge & Shipley, selective head, (5).
16"x 6' Automatic threading.	18"x8' Lodge & Shipley, c. r., p. c. f., quick change.
18"x 6' Reed, compound rest, power cross feed.	22"x10' Lodge & Shipley, selective head, (5).
18"x8' Lodge & Shipley, 3 step, quick change, double back gear, (10).	26"x14' Gleason, compound rest, power cross feed.
18"x 8' Rahn-Carpenter, compound rest, power cross feed.	36"x14' Pond, compound rest, power cross feed.
23"x14' Pond, compound rest.	

### MILLING MACHINES.

No. 2 Milwaukee pl., vert. att.	No. 14 Brainerd universal.
No. 3 1/2 Garvin plain.	Grant manufacturing.
Rivett swivel miller.	No. 3 Reed plain.
No. 2 Garvin hand miller.	No. 2 Pratt & Whitney hand.
No. 3 Garvin plain.	

### PLANERS.

26"x26"x 6' Lodge & Davis.	26"x26"x 8' Pond.
25"x25"x10' Sellers, 1 hd.	36"x36"x14, Lodge & Davis, 2 hds.

### SCREW MACHINES.

1" Smurr & Kamen.	24" Gisholt turret lathes, (3).
1 1/2" No. 54 National Acme auto.	21" Gisholt turret lathe.
20x7 F. & S. universal turret.	4" Rivett, wire feed.
15x6 Windsor turret.	3 1/2" Cleveland automatic.
20" Jones & Lamson, single pulley drive.	1 1/2" National-Acme automatic.
2" Cleveland automatics, (32).	1 1/2" Rivett, plain turret.

### MISCELLANEOUS.

Broaching machine, No 3 Lapointe.	Keyseater, No. 1 Davis.
Cutting-off machine, 6 1/2" automatic.	Press, inclinable, No. 2 1/2 V. & O.
Gear cutter, 26x10 Cincinnati.	Shaper, 24" Hendey.
Hammer, 675 lb. P. & W.	Shaper, 24" Ffather.

## SECOND-HAND MACHINERY

### FOR SALE BY

**W. L. Perkins, Jr.,**

Lathe, 18"x 8' LeBlond, c.r., cross fd.  
 Lathe, 20"x 8' American, c.r., cr. fd.  
 Lathe, 20"x 6' Blaisdell, c.r., cross fd.  
 Lathe, 20"x 8' Blaisdell, c.r., cross fd.  
 Lathe, 21"x 8' LeBlond, c.r., cross fd.  
 Lathe, 25"x 12' LeBlond, c.r., cross fd.  
 Lathe, 26"x 16' shell boring.  
 Lathe, 27"x 18' LeBlond, c.r., cross fd.  
 Lathe, 30"x 12' Lodge & S., cross fd.  
 Lathe, 32"x 12' Bridgeford, c.r., cr. fd.

**149 Broadway, New York**

Lathe, 36"x 20' Pond, c. r., cross fd.  
 Lathe, 40"x 12' Fitchburg, c.r., cross fd.  
 Lathe, 40"x 18', shell boring.  
 Lathe, 60" Bement, dbl. hd., wheel.  
 Miller, 20" Sellers, vertical.  
 Miller, 24"x 14' Bement, slab.  
 Punch, No. 3 Long & A., spacing.  
 Shaper, 12" Smith & Mills.  
 Turret lathe, 24" Warner & Swasey, hollow hexagon.

### FOR SALE BY

**McMullen Machinery Co.,**

**Grand Rapids, Michigan**

Blower, No. 2 Garden City.  
 Bolt cutter, 2" Acme, single head.  
 Bolt cutter, 1 1/2" Reliance, sgl. head.  
 Bolt cutter, 1 1/2" National, sgl. head.  
 Drill, 3' Bickford radial.  
 Drill, No. 2 Quint 6 sp. turret.  
 Drill, No. 1 Avey 3 sp. sensitive.  
 Drill, Henry & Wright 3 sp. sens.  
 Furnace, No. 1 Stewart, oven.  
 Grinder, No. 3 V. C., tool & surface.  
 Hammer, 60 lb. Bradley helve.  
 Hammers, Quickwork, (3).

Lathe, 13"x 5' Lancaster standard.  
 Lathe, 14"x 6' Prentice, standard.  
 Lathe, 14"x 6' Carroll-J., q. c. g.  
 Lathe, 14"x 6' Hendey, q. c. g.  
 Lathe, 16"x 8' Cincinnati, q. c. g.  
 Lathe, 24"x 24' Fifield, standard.  
 Lathe, 30"x 12' New Haven, standard.  
 Miller, No. 1 B. & S., universal.  
 Press, No. 36 Niagara, punch.  
 Screw mch., 24" Oliver, hvy. duty.  
 Screw machines, No. 3 Foster, (3).  
 Screw machine, No. 2 Foster.

Send for complete list.

### FOR SALE BY

**Girard Machine & Tool Co., 491-493 N. Third St., Philadelphia, Pa.**

#### LATHES.

14"x 8' Fitchburg, p. c. g.  
 16"x 10' Flather, with taper, q. c., (2).  
 17"x 8' Johnson, p. c. g., (2).  
 17"x 8' Sidney, d. b. g. & q. c., (10).  
 18"x 8' Milwaukee, sgl. bk. gr., (9).

18"x 10' Superior, d. b. g. & q. c., (10).  
 18"x 10' Milwaukee, sgl. bk. gr., (3).  
 24"x 8' Harrington, sgl. bk. gr.  
 22"x 8' Harrington, sgl. bk. gr.

#### SCREW MACHINES AND TURRET LATHES.

No. 1 Bardons & Oliver.  
 No. 2 Bardons & Oliver.  
 No. 2 Garvin.  
 No. 4 Foster, (4).  
 No. 3 Garvin, b. g. & friction head.  
 No. 24 Garvin, b. g., friction head.

No. 3 P. & W., b. g., friction head.  
 2x24 J. & L., cone drive, bar equip.  
 3x36 Jones & Lamson.  
 15" Drees turret.  
 24" Davis chucking lathes, (3).  
 Potter & J. auto. chucking, (5).

#### MILLING MACHINES.

No. 12 Brown & Sharpe, plain.  
 Wisconsin hand millers, (6).

B. & S. 36" boring mills, tur. hd., (2).

#### MISCELLANEOUS.

Cold cutting-off saws, capacities 4", 5" and 6" round.

Dynamo, 17 k. w. Diehl.

Gear cutters, 36" Whiton and 36" Gould.

Hammers, cushioned helve, 250 and 25 lbs.

Lathe bed turret, heavy, for about 32" lathe.

Planers, 17"x 17"x 3' Draper, with 1 head.

Planer, 24"x 24"x 6' New Haven, one head.

Pneumatic portable riveter.

Saws, Atkins "Kwik Kut", (3).

Slab miller, 19"x 8' Beaman & Smith, with two horizontal spindles.

Stamping and punching presses, a large number of the open back inclinable.

Melting furnaces, metal band saws, drill presses, grinders, several assorted sizes sensitive drill presses, etc.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Cincinnati Pulley Machinery Co.,**

**Cincinnati, Ohio**

#### VERTICAL GAS ENGINE.

50 h. p. Nash 3-cylinder vertical gas engine, including pump, air tanks, piping, etc., in excellent condition.

### FOR SALE BY

**Chas. Molitor Machinery Co., 118-124 S. Clinton St., Chicago, Ill.**

#### ENGINE LATHES.

- |  |  |
|--|--|
| 11"x5' Rockford, c. r., h. s.                                  | 32"x20' New Haven, c. r., 1 1/2" h. s.   |
| 14"x6' Prentice Bros., c. r., h. s.                            | 36"x12' heavy Putnam, tri. gr., c. r.  |
| 16"x8' Monarch, 3-step, double back gear, compound rest, h. s. | Niles heavy double end axle lathe, center drive, 10" opening, 24" swing, 8" centers. |
| 16"x8' Rockford, c. r., h. s.                                  | 10"x4' b. g. bench lathe, slide rest.  |
| 18"x8' Morris, 3-step cone, d. b. g. c. r.                     | <b>TURRET MACHINERY AND SCREW MACHINES.</b>  |
| No. 1 Foster, w. f., a. c. 1 1/2"                              | No. 2 Garvin, w. f., a. c. 1 1/2"  |
| No. 2 Pearson, w. f., a. c. 1 1/2"                             | 16"x6' Star plain monitor.   |
| No. 2 1/2 Garvin, b. g., f. h., w. f., a. c. 1 7-16"           | 12"x4' Foster plain monitor.   |

#### PUNCH PRESSES.

- |  |  |
|--|--|
| No. 1 V. & O., o. b. i., 1 1/2" str.             | No. 2 American Can, solid back, 1 1/2" stroke.   |
| No. 3-A Standard, straight sided, 1" stroke.     | Consolidated horizontal 8" stroke straight sided trimming press, 15" between uprights. |
| No. 4 Crosby b. g. press, 24"x16" bed, 3/4" str. |  |

#### MILLING MACHINES.

- |   |  |
|---|--|
| Newton, heavy, plain column, 48" auto. table feed, vertical, horizontal and rotary milling attachment. Weight about 8500 lbs. | Chicago, column, hand. o. h.                     |
| No. 2 Brown & Sharpe pl. div. hd. Davis, hand bench, collet att.  | No. 3 Chicago, plain miller, (2).                |
|   | No. 2 Becker vert. with rotary att.              |
|   | No. 2 Kempsmith plain miller with dividing head. |

#### DRILL PRESSES.

- |   |   |
|---|---|
| 13" Acme, sensitive.                      | 20" Barnes, b. g., camel back, with tapping attachment.   |
| 14" Rockford, sensitive.                  | 16" Barr, sensitive, with tap. att.   |
| 15" Barnes, gear driven.                  | Andrew 9-spindle straight line adjustable rail drill, 8" maximum centers, 3" minimum, cap. 1/2" drills. |
| 20" Mechanics, plain.                     |   |
| 22 1/2" Barnes, b. g., p. f., sliding hd. |   |
| 24" Mechanics, b. g., p. f., slid. hd.    |   |

#### MISCELLANEOUS.

- |  |  |
|--|--|
| Beading mch., Niagara Pettingill, heavy.   | Nut tapper, National 4-spindle vertical, 1/2" cap.               |
| Bulldozer, double end, wt. 7500 lbs.   | Punch, grd., 27" throat, 1/2" thru 1 1/2".                       |
| Fender wiring machine, Yoder.  | Shaper, 16" Ayers, traverse head.                                |
| Gear hobber, 18" Grant-Lees.   | Shaper, 24" Steptoe.   |
| Grinder, 18"x6" Landis.  | Shears, square, 30" P. S. & W., (3).                             |
| Grinder, pl. cylindrical, 6x28 Modern.   | Shears, 10" Ryerson, with rotary traveling cutter, for 20 gauge. |
| Grinder, gear cutter, 18" G. & E.  | Shear, rotary, Collier Smith.                                    |
| Grinder, valve seat, 4-sp. Foote-Burt adjustable, minimum 2 1/2" center, maximum 22".  | Slip roll former, 3x45, Bertsch, motor or power.                 |
| Hammers, helve, 15, 25, 40 and 60 lb. Bradley.   | Slotter, 14" vertical.   |
| Hammer, steam dr., 600 lbs. Bement.  | Speed lathes, 10"x4' Seneca Falls, (3).                          |
| Keyseater, Morton, 1 1/2" capacity.  | Spinning lathe, 30" Stoll.                                       |
| Keyseater, Mitts & M., 2" cap.   | Steel brakes, 4' and 8'.   |
| Large assortment of tinners' tools, folders, rolls, punches, shears, electric motors and drills, buffing machines, grinders, arbor presses, lathe chucks, machinists' bench vises, time clocks, gas furnaces, foot lever presses, hack saws, air compressors, fans, blowers, bench drills, filing machines, index centers, turret heads, anvils, tapping machines, bench lathes. | Wire straightener, power, 1/2" cap.                              |

## SECOND-HAND MACHINERY

### FOR SALE BY

**Swind Machinery Co.,**

**Widener Bldg., Philadelphia, Pa.**

For Immediate Delivery.

Air forging hammers, No. 3 Nazel Beche, capacity 5x5", used, (2).

### NEW MACHINES.

Drill press, 3-spindle Kern, ball bearing.

Grinders, universal cutter and reamer, high grade, (2).

Grinder, universal profile, Fischer.

Millers, hand, Whitney type, (2).

Shapers, 14", 16" and 20" stroke.

Shear, rotary ring and circle, capacity No. 10 gauge, circles 10" to 60" diam.

### FOR SALE BY

**Peninsular Machinery Co.,**

**110 Beaubien St., Detroit, Mich.**

Drill, 10" sensitive.

Forming roll, 3"x48".

Grinder, cutter, No. 1 LeBlond univ.

Grinder, emery, No. 0 Blount.

Grinder, emery, No. 1 Blount.

Grinder, emery, No. 3 Blount.

Grinder, twist drill, 1/2" to 2 1/4".

Lathe, 16"x 6' LeBlond, engine.

Lathe, 16"x 8' LeBlond, eng., taper.

Lathe, 14"x 8' LeBlond, eng., taper.

Lathe, 17"x10' LeBlond, automobile.

Lathe, 20"x10' LeBlond, engine.

Lathe, 17"x 6' LeBlond, rap. produc.

Lathe, 24"x10' LeBlond, engine.

Lathe, 12"x 6' Prentice, eng., gd. hd.

Miller, No. 1 U. S., hand.

Miller, No. 1 Van Norman, hand.

Press, No. 0 Atlas, arbor.

Press, No. 1 Atlas, arbor.

Press, No. 2 Atlas, arbor.

Shaper, 16" Rockford, b. gd. crank.

Shaper, 16" Barker plain.

Shaper, 16" Walcott, crank.

### FOR SALE BY

**Russell Machine Co.,**

**28th St. and A. V. R. R., Pittsburg, Pa.**

### DRILL PRESSES.

24" Aurora, b. g., p. f.

20" Silver, b. g. power feed, new,

20" Silver, w. & l., q. r., new.

Silver post drill, h. p., new.

20" Canedy-Otto post drill.

14" Woodward-Rogers bench drill.

3-spindle sensitive.

10" Dwight Slate sensitive floor.

### RADIAL DRILLS.

3' plain, box table.

8' Foadick plain.

### LATHES.

48"x16' single back geared.

39"x23' 2" H. C. Fish, triple grd.

32"x16' I. W. Johnson, triple gd.

28"x17' New Haven, h. s., c. r., b. g.

24"x22' Putnam.

24"x12' New Haven, t. a.

22"x12' New Haven, h. s., c. r.

22"x10' Pittsburgh, h. s., c. r.

17"x10' Perkins, h. s., c. r.

14"x 5' Fox brass turret.

### PLANERS.

42"x36" Gray, 10' platen.

26"x26" Pond, 5' table.

### SHAPERS

24" Ohio heavy duty b. g. crank.

26" Hendey, friction geared.

### MISCELLANEOUS.

Air compressor, 400 cu. ft., 100 lbs.

Bending rolls, No. 3 Hilles & Jones.

Bending rolls, vert., No. 7 Wickes

Bros.

Bending rolls, Bement-Miles horiz.,

engine driven, cap. 1 1/2"x18".

Grinder, Springfield, surface.

Press, No. 140 Ferracute.

Press, arch, 3 1/2" stroke.

Punch, No. 24 Niagara, 15" throat.

Punch or shear, No. 14 Williams-

White, 16" throat, cap. 1 1/2"x1",

single end.

Punch or shear, No. 2 Hilles & J.,

30" throat, cap. 1"x1", sgl. end.

Punch or shear, Reade, gd., 22" tht.

Punch and shear, New Doty, 9" tht.

Shear, Reade, geared bar, 22" throat.

Shear, Perkins No. 2 rotary, 12" tht.

Shear, Waterbury-Farrell, alligator

lever, cap. 2 1/2" sq.

Shear, alligator cam driven, geared,

8" knife.

Shear, Bliss, geared slitting.

Emery grinders, blowers, motors.

## SECOND-HAND MACHINERY

### FOR SALE BY

**E. B. Stickley,**

**Goebel Building, Detroit, Mich.**

Boring mill, 34" Colburn vertical, 38" actual swing, one turret head.  
Boring mill, Rockford horizontal, 2 1-16" bar.  
Gear shaper, No. 6 Fellows, 35" capacity.  
Screw machine, No. 7 B. & O., 2" capacity, complete.  
Screw machine, No. 56 National Acme multiple spindle, automatic, 2 3/4" capacity, arranged for motor drive, new.  
Turret lathes, 3x36 J. & L., geared heads and geared feeds, (2).

### FOR SALE BY

**J. L. Osgood,**

**45 Pearl St., Buffalo, N. Y.**

Chucking lathe, 21" P. & J.  
Chucking lathe, 24" Davis.  
Lathe, eng., 9" Barnes.  
Lathe, eng., 15"x6" Porter, and ck.  
Lathe, 17"x8" Blaisdell, and chuck.  
Lathe, 24" raised to 34", Fifiel 12' bed, chuck.  
Piston and ring machine, Gridley automatic, motor drive.

Screw machine, hand, No. 1 Foster.  
Screw machine, hand, 1/2" B. & S.  
Screw machine, hand, 1" P. & W. hex. turret.  
Screw machines, No. 5 Warner & S.  
Spur gear testing mch., Gleason.  
Squaring shear, foot, 30" Niagara.  
Time recorder, International, 200 numbers.

### FOR SALE BY

**Federal Machinery Sales Co.,**

**8 N. Jefferson St., Chicago, Ill.**

#### DRILLS.

20" Silver upright, wheel and lever and power feed, (15).  
26" Barnes, sliding head, back gear, power feed.  
32" Mechanics, sliding head, back gear, power feed.  
20" Foote-Burt heavy duty. s. p. gear-box drive.  
2-spindle 20" Barnes, back gear, power feed.  
2-spindle Dwight-Slate sensitive.  
4-spindle Barr sensitive.

#### GEAR CUTTERS.

22"x5"x6 pitch Gould & Eberhardt, spurs and bevels.  
36" Whiton, spur gears only.

#### GRINDERS.

16"x66" Landis crank grinder.  
No. 2 Oakley universal cutter and tool grinder.

#### LATHES.

14"x8' Ryerson, h. s., c. r. | 24"x12' Lodge & Shipley, q. c. g.,  
16"x8' Lodge & Davis, h. s., c. r. | h. s., c. r.  
17"x8' National, q. c. g., h. s., c. r. | 28"x15' New Haven, h. s., c. r.

#### MILLING MACHINES.

Newton duplex slab miller, 40" between spindles, 12' table.  
No. 25 Becker, plain (about size No. 2 Cincinnati).

#### SCREW MACHINES AND TURRET LATHES.

1/2" Warner & Swasey, good as new.  
No. 12 1/2 Garvin, friction geared head, 2" capacity.  
Warner & Swasey, 2 1/4" friction geared head.  
20"x8' Hamilton engine turret lathe, geared friction head, power feed, turret on bed, pan bed.

#### PLANERS.

24"x24"x6" American, good as new. | 24"x24"x6" Powell, first class.

#### MISCELLANEOUS.

Bolt cutter, 2" Foote-Burt, triple head.  
Cold saws, 3" Smith and Post.  
Press, No. 5 American Can, o. b. i., plain.  
Riveter, 1/2" high speed.  
Squaring shear, 5' Bertsch, 18" gap, hand power.  
Send for "Purple List."

## SECOND-HAND MACHINERY

### FOR SALE BY

**Machine Tool & Supply Co.,**

**Davenport, Iowa.**

Drill presses, 20", all geared, (6).  
 Drill presses, 25" (2).  
 Drill press, 36" Snyder.  
 Gear cutter, automatic.  
 Grinder, internal.  
 Grinders, surface, (3).  
 Grinders, universal tool, (3).  
 Hammer, high speed.  
 Lathes, 14" with chuck, used. (2).  
 Lathes, 18", quick change gear, (4).

Lathe, 24", long bed.  
 Lathe, 28" boring and facing.  
 Miller, No. 34 Fox.  
 Miller, No. 0 Rockford.  
 Miller, plain, No. 2 Rockford.  
 Miller, universal, No. 2 Rockford.  
 Planer, 26"x36".  
 Riveters, Shuster, (2).  
 Shapers, 16", 18" and 24", (3).

Large stock of used machines, not rebuilt, but in good condition.

### FOR SALE BY

**B. C. Allen Machinery Co.,**

**1000 W. Randolph St., Chicago**

Blowers, Root pos. No. 25, ea. \$ 30.  
 Drills, 14" sen., 2 tables, (5) 55.  
 Drill, 14" sen., American 35.  
 Drill, 20" Barnes, with chuck 60.  
 Drill, 21" sl. hd., with chuck 120.  
 Drill, 6 spdl., sens. 45.  
 Hack saws, 2 large 25.  
 Lathe, 9"x4' Rockford 150.  
 Lathe, 9"x5' Star 175.  
 Lathe, 12 x5' Reed 125.  
 Lathe, 13"x6' Ames 175.  
 Lathe, 14"x6' Reed, and chuck 250.  
 Lathe, 17"x5' Rahn Mayer 475.

Lathe, 18"x10' Star 475.  
 Lathe, 24"x9' Pratt & Whitney 600.  
 Lathe, 24"x12' L. & S., q. c. g. 1200.  
 Lathe, 24"x24' Fifield 525.  
 Lathe, 36"x16' Putnam 1050.  
 Lathe, 50"x26' New Haven 4700.  
 Miller, bench, Burke 95.  
 Miller, No. 2 Becker 550.  
 Miller, No. 2 b. g. pl 300.  
 Motor, 1 h. p., a. c. 60.  
 Punch press, horn 50.  
 Punch press, No. 3 Crosby 175.  
 Tube cutting machine, Fox 60.

### FOR SALE BY

**Homer Strong,**

**210 State St., Rochester, N. Y.**

**Branch Offices: Syracuse, Buffalo, Albany.**

#### LATHES—NEW.

Hardinge bench lathe.  
 No. 54 Sloan & C. bench lathes, (2).  
 6"x30" Dalton, with legs.  
 11"x5' Worcester pl. ch. lathes, (2).  
 12"x5' Mulliner, t. a., pan bed, draw-  
 in, q. c. g., (2).  
 13"x6' Worcester lathes, (2).  
 14"x6' Flather, q. c., (4).

14"x6' Hamilton, q. c.  
 15"x6' Rockford, p. c., (2).  
 16"x6' Worcester.  
 16"x6' Hamilton, q. c. g.  
 16"x6' Flather, q. c. g., sgl. b. g., (2).  
 16"x8' Flather, q. c. g., dbl. b. g., (3).  
 16"x8' Hamilton, q. c. g., c. r., (2).

#### LATHES—USED.

16"x 6' L. & S., q. c., gd. hd., t. a., pan.  
 20"x10' J. & L., compound rest.

28"x10' Hamilton, q. c. g. lathe, c. r.  
 30"x12' Prentiss, c. r., pl. ch. gear.

#### SCREW MACHINES—NEW.

No. 0 Foster, plain head, wire feed, 9-16 cap., (2).  
 No. 1 Foster, plain head, wire feed, 13-16 cap., (3).  
 No. 2 Foster, plain head, wire feed, 1-16 cap., (2).  
 No. 24 Garvin, geared friction head, wire feed, 1 7-16 cap.  
 No. 4 Foster, geared friction head, 1 9-16 cap., power feed turret, (5).  
 No. 6 Foster, geared friction head, 24 cap., power feed turret, (3).  
 1" Pierce, hand, plain head, wire feed, 1" cap.

#### SCREW MACHINES—USED.

24" Cleveland auto., single spindle.  
 No. 61 Acme, 4-spindle, (3).

No. 5-A Potter & Johnston semi-  
 automatics, (2).

We carry a very large stock in our Rochester warehouse, ready for shipment at once. Stock includes both new and used lathes, shapers, milling machines, screw machines, grinders, etc., etc. We believe we can serve you to your advantage.



## SECOND-HAND MACHINERY

### FOR SALE BY

**R. W. Wells Machinery Company**  
**Machinery Hall**

**547 W. Washington Blvd.,**

**30-32 N. Clinton St., Chicago**

#### LATHES.

No. 3 extra heavy duty proj. lathes,  
 4" cap.  
 7x48" Lo-Swing, standard equip.  
 22x13' 6" Lodge & Davis.  
 60" Niles pulley lathe.  
 21" type "H" Gisholt, t. l.

No. 3-A Warner & S. turret lathe.  
 24" Gisholt t. l., 4" hole in spindle.  
 24" Gisholt t. l., 2 1/2" hole in spindle.  
 24" American t. l., 3 1/2" hole in spdl.  
 No. 7 Bardons & Oliver t. l., 2" wire  
 feed cap.

#### MISCELLANEOUS.

Boring machine, 4-spindle.  
 Drills, electric, Scotch radial.  
 Drill, 14 spindle Baush, 2" spindle,  
 No. 2 m. t. shank.  
 Drill, 24" Aurora, b. g. auto feed  
 and stop.  
 Grinder, P. & W. universal.

Hack saw, 6" Acme power.  
 Milling machine, No. 4 Hendey,  
 Lincoln type.  
 Sheet metal cutter, No. 0 Gray.  
 Sheet metal cutter, No. 1 Gray.  
 Thread milling machines, 4" auto.

List your machines with us.

### FOR SALE BY

**The Osborne & Sexton Machinery Co.,**

**Columbus, Ohio.**

#### LATHES.

9" to 13" Barnes, comp. rest, new.  
 13-15-16 and 18 O. & S., h.s., c.r., new.  
 14"x 6' Hamilton, h. s., comp. rest.  
 15"x 6' Bradford, power feed turret.  
 15"x 6' Fox universal lathe.  
 18"x 6' Mueller, turret on shears.  
 18"x 8' Prentice, geared head.  
 18"x 8' Hamilton, dbl. bk. gr., new.

20"x 8' Prentice, geared head, (2).  
 20"x 8' American, geared head.  
 22"x10' Hamilton, dbl. bk. gr., new.  
 24"x12' South Bend, h. s., cp. r.  
 26"x10' Prentice, geared head.  
 30"x12' Fitchburg, comp. rest.  
 30"x16' Prentice, gd. hd., raised to 48".  
 54"x18' Pond, old style.

#### TURRET LATHES AND SCREW MACHINES.

1" Garvin hand screw machine.  
 14" Wood hand screw machine.  
 2x24 J. & L., bar equipment, (2).

20x8 Lodge & Davis, pr. fd. turret.  
 21" Gisholt turret.  
 24" Gisholt turret.

#### SHAPERS AND PLANERS.

20" Smith & Mills, triple geared.  
 16, 18 & 24 Barker, crank, new.  
 24" Gould & Eberhardt, crank.

20"x20"x 4' Industrial.  
 24"x24"x 6' Lodge & Davis.  
 36"x36"x18' Sellers.

#### PRESSES.

No. 1 Hibbard o. b. l., nearly new.  
 Perkins, dbl. housing, 16x24.  
 355 Bliss, toggle drawing, 42,000 lbs.

Hydraulic, 37" bet. uprights.  
 500-ton hydraulic, with pump.  
 Foot, various sizes.

#### DRILLS AND RADIALS.

Henry & Wright sgl. spdl., high spd.  
 34' Canedy-Otto radial, plain, new.  
 5' Plain radial, Baush.

Sensitive 1, 2 & 3 spindle.  
 Sliding head 24", 26" and 28".  
 Quint 6-hole turret.

#### GRINDERS AND MILLERS.

No. 3 LeBlond, plain.  
 Wisconsin, hand, (2).  
 No. 3 Ingersoll, vertical.  
 No. 3 Oesterlein universal.  
 18"x48" Landis plain.  
 No. 3 Kempsmith, with dividing hd.

No. 1 1/2 Valley City universal, new.  
 Hartford 8"x36" surface gdr., new.  
 Landis 10"x20" universal.  
 No. 1 1/2 Valley City, plain, new.  
 Cincinnati plain, 24" x7"x19".  
 Garvin, hand and power, 18" travel.

#### MISCELLANEOUS.

Band saws, metal, 30" Wright, (2).  
 Borer, 42" car wheel, with hoist.  
 Boring mill, 32" Baush, turret hd.  
 Crane, 10-ton 30' Toledo electric,  
 220 v., d. c.  
 Crane, 10-ton hand hoist, 32' span.

Cut-off machine, 3" Davis.  
 Gear cutter, No. 3 B. & S.  
 Keyseater, Baker Bros. 1 1/2" keyways.  
 Motors, 1 to 50 h. p., 220 v., 3 phase.  
 Squaring shear, 30 & 36" 20 gauge.  
 Tappers, Garvin and P. & W.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Canton Machine Shop, - 320 Rex Ave., Canton, Ohio**

#### USED MACHINERY.

Belt polishing machine.  
Buffing lathe.  
Die grinder.  
Drill presses, 25", 26" and 30".  
Emery grinder.  
Engine lathes, 18", 20", 24" and 30".  
Keyseater, Davis.

Lathes, 12", 14", 16" and 17".  
Pipe machine, No. 11 Jarecki.  
Planers, 26"x26"x12" and 26"x26"x4".  
Punch press, No. 5 Farrell.  
Punch press, No. 55 Swaine.  
Punch and shear, Queen City.  
Shapers, 14" and 16".

#### NEW MACHINES.

Bench drills.  
Drill press, 20".

Engine lathe, 18"x3' Mueller.  
Lathe and drill chucks, vises, etc.

### FOR SALE BY

**G. L. Bennett Machinery Co., Inc., 30 Church St., New York City**

Drill, 6 spindle multiple, No. 3 Baker Bros.  
Drill, 32 spindle multiple, Moline.  
Drills, upright, 36" and 42" Gould & Eberhardt, heavy.  
Engine lathe, 18"x10' Flather, quick change gear, chuck.  
Engine lathe, 48"x10' New Haven, light pattern.  
Hammer, steam, 24,000 lb. Bement.  
Lathes, turret, Warner & Swasey, Bullard and Potter & Johnston.  
Lathe, 54"x22' Gleason type (W. L. Co.) triple geared.  
Lathe, 92"x26' Union Iron Works, triple geared.  
Milling machine, Brainard double end, insert cutters.  
Milling machine, vertical, No. 2 Hillis & Jones, rev. table.  
Pipe machines, 8" Saunders, also E. C. & B.  
Planer, 42"x42"x16' Bement, three heads.  
Radial drill, 76".  
Shear, bevel plate, No. 2 Thompson, 1" plate.

### FOR SALE BY

**Niles-Bement-Pond Company, - 111 Broadway, New York**  
**Located at Chicago, Boston and New York**

#### LATHES.

12"x 8' speed lathe.  
15"x 7' speed lathe.  
16"x 8' Von Wyck, quick change.  
32"x12' Pond, 220 v., d. c. motor dr.

36"x17' Pond, trip. geared., q. c.  
No. 2 Bement double axle lathe.  
42" Niles double car wheel lathe.

#### TURRET AND SCREW MACHINES.

4" four-spindle old style Acme automatic screw machine.  
4" Style "B" Spencer single turret automatic screw machine.  
2"x26" Pratt & Whitney turret lathe.

#### DRILLING MACHINES.

13" friction, sensitive.  
60" Niles, gooseneck.  
3' Grant combined radial drill and boring machine.  
34' Bement, plain radial.  
Prentice portable radial.  
Four-spindle gang drill.

No. 12 P. & W. multiple drill, square head, 10 spindles.  
No. 13 Pratt & Whitney multiple, 4" capacity, 12 spindles.  
No. 10 Pratt & Whitney multiple, 1 1/2" capacity, 10 spindles.

#### MISCELLANEOUS.

Boring mch., horiz., Kelly, 2" spdl.  
Gear cutter, 36" No. 3 Newark.  
File sharpener, American.  
Punch, single, Perkins, cap. 1/2" in 1/2',  
7" throat.

Punch & shear, double, Huntington, cap. 1/2" in 1/2", with 18" and 24" throats, arr. for motor drive.  
Saw sharpener, Espen-Lucas.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Neidow & Payson Co.,

Boring and turning mills, 42" & 51".  
 Drill, 23" B. F. Barnes.  
 Drill, 32" Prentice, sliding head.  
 Lathe, 42"x19" bed, triple geared.  
 Planer, 24"x24"x6" American.  
 Slab miller, capacity 40"x20"x12".  
 Side Milling Cutters, inserted High Speed Steel Cutters. These Cutters have been used, but are in good condition. Cutters similar to No. 307 P. & W. catalogue, page 106:—

#### 9 So. Clinton St., Chicago, Ill.

	Diam.	Face.	Hole.
4—5"	1 1/2"	1 1/2"	1 1/2"
1—8 1/2"	1"	1"	1"
8—6"	1"	1"	1 1/2"

End Milling Cutters, inserted High Speed Steel Cutters. Similar to cutter shown on Brown & Sharpe catalogue, page No. 274:—

	Diam.	Face.	Hole.
4—9"	1 1/2"	1 1/2"	4"
4—12"	3"	3"	2 1/2"

### FOR SALE BY

#### The O'Brien Machinery Co.,

Drill, 24" Richards, sl. hd., b.g., p.f.  
 Grinder, Gisholt, cutter.  
 Hammer, 1,000 Farrell-F., bd. drop.  
 Lathe, 16"x6" Cincinnati.  
 Lathe, 16"x9" Lehman.  
 Lathe, 18"x8" Cincinnati.  
 Lathe, 21"x14" New Haven.  
 Lathe, 24"x12" Fitchburg.  
 Planer, 24"x24"x6" Sellers.  
 Press, E-4 Ferracute.  
 Presses, ft. pwr., about 30 assorted.  
 Press, DD-66 Ferracute straight col. dbl. action drawing, wt. 21,000 lbs.

#### 119 N. Third St., Philadelphia, Pa.

Rifling mch., horiz. boring or rifling mch., wt. about 10,000 lbs.  
 Saws, 30" Espen Lucas, mtr. dr..(2).  
 Screw machine, 1/2" Pratt & Whitney, wire feed, with collects.  
 Screw machine, 2 1/2" Cleveland auto.  
 Shaper, 20" Smith & Mills.  
 Shaper, 20" Leisy Patton.  
 Spinning lathe, No. 5 Bliss auto., 22" swing.  
 Swedging mch., Langelier 3 1/2" AT-4.  
 Turret lathe, 20" Bogart heavy b. g. turret screw cutting lathe.

### FOR SALE BY

#### E. L. Easley Machinery Co., 551-557 Washington Blvd., Chicago, Ill.

##### DRILL PRESSES.

No. 1 Avey high speed drill.  
 No. 1 three spindle Avey.  
 1 spindle H. & W. high-speed.  
 34" W. F. & John Barnes.

3 1/2" Prentice Bros. plain radial.  
 36" Bickford plain radial.  
 3" Dreses plain radial.  
 4" Mueller plain radial.

##### GRINDERS.

No. 1 Cincinnati, universal.  
 No. 1 Norton full univ. tool & cutter.  
 14"x50" Norton plain.

9"x20" No. 2 Bath univ. grinder.  
 4"x30" P. & W. sizing grinder.  
 12"x32" Landis plain grinder.

##### LATHES.

28"x14" Hamilton, taper.  
 16"x8" Prentice Bros. taper att.  
 18"x8" Schumacher & Boye, q. c. g.

14"x 6" Lodge & Shipley, q. c. g.  
 20"x10" Schumacher & Boye, taper.  
 9"x 4" Star.

##### SCREW MACHINES.

1/2" Cleveland automatics, (2).  
 1 1/2"x9" Acme, friction head.  
 No. 6 W. & S. 2 1/2" cap., fric. head.  
 No. 1 Foster, plain head, cap. 13-16".

No. 4 Foster, plain head.  
 No. 2 1/2" Garvin 1 7-16" cap., fric. hd.  
 1/2" Foster-Kimball, plain head.  
 1/2" Smurr & Kamen, plain head.

##### MISCELLANEOUS.

Boring mills, 34" Colburn, (2).  
 Boring mill, 36" Niles.  
 Center chucks for ball case grinder.  
 Filer, No. 2 Cochrane-Bly.  
 Gear cutter, No. 12 B. & S. auto.  
 Hand wheel turning attachment.  
 Miller, univ., No. 14 Brainard.  
 Pipe machine, 3" Stover.  
 Planer, 24"x24"x5" New Haven.

Planer, 40"x40"x10" P. & W.  
 Polisher, No. 4 Diamond, motor driven, 230 v., d. c.  
 Shaper, crank, 16" Barker.  
 Shaper, 24" Cincinnati, back geared.  
 Turret lathe, 2 1/2"x24" W. & S.  
 Turret lathe, 24" Steidle.  
 Valve millers, for brass.

## SECOND-HAND MACHINERY

### FOR SALE BY

**C. M. Thompson Co.,**

**35 S. Clinton St., Chicago**

#### NEW MACHINES AND EQUIPMENT.

Grinding stands, Nos. 1, 2, 3 & 4.  
Independent chucks, 14" and 16".

Lathes, 14", 16" and 18" Champion  
Tool Works Co's lathes.

#### USED MACHINES.

Drill presses, 23, 24 and 28".  
Grinder, surface, No. 2 Saxon.  
Grinder, universal, No. 3 Oesterlein.  
Keyseaters, No. 4 Mitts & Merrill,  
fully equipped.  
Lathe, 26x30" Bradford.

Lathes, 12" and 14".  
Lathes, turret, 24" Jones & L.  
Planer, 36x36x13" New Haven, one  
head on rail.  
Screw machines, 8 & 13-16".  
And various other tools.

### FOR SALE BY

**Fred C. Dickow,**

**31-35 S. Desplaines St., Chicago, Ill.**

#### LATHES.

15"x5' Blaisdell, comp. rest.....\$250.  
16"x6' Pratt & Whitney, c. r..... 350.

36"x12' Bement, plain rest.....\$500.  
11 1/2"x3 1/4' Foster & Kimball tur... 250.

#### MISCELLANEOUS.

Beam shear, Pell, pwr., steel frame.  
Bench drills, (5).  
Boring mche., Corliss engine cyl.  
Broaching machines, Nos. 1 and 2  
Knowles, horizontal.  
Drill presses, 20", (5).  
Floor drills, joiner, saws; power hack saws, index centers, etc.

Drill press, 16 spindle P. & W.  
Drill press, multiple, adjustable  
spindle, Western.  
Planer, 24"x24"x6" New Haven, \$700.  
Profiling machine, No. 2 Ames dbl.  
spindle, \$ 350.

### FOR SALE BY

**Broadway Machinery Co.,**

**236-238 Broadway, Cincinnati, Ohio**

Gear cutter, 38" Gould & E.  
Grinder, univ., No. 1 1/2 Cincinnati.  
Grinder, universal, No. 2 B. & S.  
Grinders, planer type. B. & S., (2).  
Lathe, 14"x8" Lodge & Shipley, q. c.  
Lathe, 16"x6" Prentiss.  
Lathe, 16"x8" LeBlond, q. c.  
Lathe, 20"x8" Prentiss, q. c.  
Miller, vertical, No. 2 Becker.  
Planer, 30"x30"x8", one head.  
Punch, inc., No. 3 American Can.

Punch, inc., No. 5 Toledo.  
Punch, inc., geared, No. 4 1/2 Am. Can.  
Screw mch., No. 2 Pratt & Whitney.  
Shaper, b. g., 16" Steptoe.  
Shaper, b. g., 20" Stockbridge.  
Shaper, b. g., 20" Juengst.  
Shaper, friction, 20" Hendey.  
Turret lathe, 21" Gisholt.  
Turret lathe, No. 2-A Warner & S.  
Turret lathe, No. 3-A Warner & S.  
Turret mill, vertical, 34" Bullard.

### FOR SALE BY

**Brownell Machinery Co.,**

**11-13 Eddy St., Providence, R. I.**

Boring mill, 37" Bullard, 2 swivel hd.  
Drills, 20" back gear, power feed,  
upright, new, (4).  
Drills, 24" Sibley, adjust. hd., new, (7).  
Gear cutter, No. 3 B. & S. auto.  
Gear cutter, 30" old style Brainerd.  
Gear generators, 12" Gleason, single  
tool, (2).  
Grinder, 5"x48" Pratt & Whitney.  
Grinder, No. 70 Heald internal.  
Grinder, Modern plain, 12x36, new.  
Grinder, Morse plain, 6x30, new.

Grinder, Norton plain, 6x32.  
Lathe, 16"x5" Reed, r. and f.  
Lathe, 16"x6" Reed, r. and f., (2).  
Lathe, 16"x7" Oliver, new.  
Lathe, 18"x8" Porter.  
Lathe, 18"x8" Davis, d. b. g.  
Milling machines, Reed, plain, (2).  
Milling machines, Pedrick & Ayer  
heavy duty plain.  
Milling machines, No. 4-B Becker  
vertical, new, (2).

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Clark Machinery Co.,

Blower, No. 8 Buffalo Forge Co.  
Blower, No. 1 Root, positive press.  
Centering machine, No. 1 P. & W.  
Drill press, sgl. spdl. ball bearing.  
Drill press, 4-spindle 20" Barnes automatic, all spindles power feed.  
Drill press, Baker Bros. heavy.  
Grinder, No. 3 Oesterlein univ., new.  
Miller, double end valve

#### 1302 Ontario Ave., Cleveland, O.

Miller, vertical, table 22"x54".  
Miller, Garvin, Lincoln type.  
Miller, Garvin hand miller.  
Miller, No. 32 Kempsmith.  
Plating dynamos, 300, 450 amp., 5 v.  
Punch press, No. 5 Rockford geared.  
Screw machine, 2" Cleveland auto.  
Screw machine, 2 1/2" Hartford auto.  
Turret lathes, 2x24" J. & L., (2).

### FOR SALE BY

#### Western Mchy. Co., —C. H. Norton— 112 W. 3rd St., Cincinnati, O.

Small Machine Shop, comprising the following machinery:

Drill, Barnes, b. g., power feed.  
Lathe, 16"x6" Bradford, comp. rest.  
Lathe, 16"x6" LeBlond heavy duty, q. c. g., taper attachment.  
Miller, plain, Garvin.  
Hack saw, power.

Emery stand.  
Motor, 220 volt.  
Forge, chucks, collets, shafting, pulleys, hangers, belting, vises, small tools, etc.

\$2,000 cash. Immediate delivery.

#### MISCELLANEOUS.

Cornice brake, 6'.  
Drill, horiz., 40" Barnes.  
Drill presses, 30" upright, (8).  
Gear cutter, spur, 30" B. & S. No. 3.  
Lathe, 34"x17" Enterprise, tri. grd.  
Lathe, 30"x16" Niles, comp. rest.  
Lathe, 24"x16" Niles.  
Lathe, 24"x12" Steptoe.  
Lathes, 12" and 14", a number of.  
Miller, comb. vert. and horiz. spdl., No. 1 Beaman & Smith.

Miller, plain, No. 2 Cincinnati.  
Punch, power, Queen City, cap. 3/4" thru 1 1/2", 12" throat.  
Punch, pwr., Cinti. cap. 3/4" thru 1 1/2".  
Radial, plain, 4' Wais & Roos, gear box drive.  
Radial, post, 30" Chicago Heights.  
Shaper, geared, 24" Walcott.  
Shaper, b. g. crank, 21" American.  
Shaper, crank, 16" Barker.

Motors, miscellaneous machinery, etc.

### FOR SALE BY

#### Dale-Brewster Machinery Co., Inc.,

547 W. Washington Blvd., Chicago - 30 Church St., New York

#### LATHES—NEW.

14"x 6" Davis, q. c. g.  
12"x5 1/2" Davis "close coupled."  
20"x 7 1/2" heavy duty plain turning.

16"x 6" Monarch, d. b. g., q. c. g.  
14"x 6" Davis, with taper attach.

#### SHAPERS—NEW.

14" Davis, power down feed.  
16" Davis, power down feed.  
24" Milwaukee, back geared.

20" Davis, power down feed.  
24" Davis, power down feed.

#### MILLING MACHINES—NEW.

No. 3 Kempsmith universal.

U. S. No. 1 hand millers.

#### DRILLS—NEW.

Pawling & Harnischfeger No. 52 heavy duty vertical.  
20" power drills, b. g., p. f.

24" Barnes all geared.  
14" U. S. sensitive.  
Sensitive drills.

#### MISCELLANEOUS—USED.

Boring mill, vertical, 60" Niles.  
Drill, 12-spdl. multiple Baush.  
Gear shaper, 36" Fellows.

Lathe, 48"x18", Pond heavy duty.  
Profile grinder, Cleveland, new.  
Relieving machine, Cleveland, new.

Write or wire us for particulars.

## SECOND-HAND MACHINERY.

### WANTED BY

**The Machine Tool Sales Co.,**

**Pittsburgh, Pa.**

#### BORING MILLS.

10' vertical, 2 heads.  
42" vertical, 2 heads.

60" vertical, 2 heads.  
30" vertical, 1 head.

#### DRILLING MACHINES.

5' or 6' radials.  
Upright, 24" capacity.

3 spindle, rail type, to bore cylinders  
4" diameter x 16".

#### GRINDING MACHINES.

10x36 universal.

10x72" plain.

#### LATHES.

42"x12' d. b. geared.

60"x18' triple geared.

#### PLANERS.

30"x16', 2 heads.

60"x18', 4 heads.

#### MISCELLANEOUS.

Angle bending rolls, 6x6.  
Bending rolls, 6 to 15'.  
Bulldozers.  
Guillotine shears.  
Planer type millers.  
Plate planer, 30'.  
Presses, heavy.

Punch, 4"x12 to 48.  
Punch, 1 1/2" horizontal.  
Punch and shears.  
Rotary bevel shear, 1" plate.  
Slab millers.  
Steam hammers.  
Wheel press, 150 to 300 ton.

### FOR SALE BY

**Herman L. Winterer,**

**908-910 Beach St., Philadelphia, Pa.**

#### LATHES.

38"x14' Fifield.  
31"x16' Fifield.  
29"x18' Schumacher & Boye.  
26"x10' Pittsburgh, d. b. g.  
22"x10' Johnson.  
21"x23' LeBlond dbl. combination.  
21"x14' Blaisdell, b. g.  
21"x10' Lodge & Davis, c. r.

20"x 8' Flather, c. r.  
20"x 8' Putnam.  
20"x 8' Perkins.  
19 1/2"x10' Fitchburg, b. g., (2).  
18"x12' New Haven, b. g.  
18"x10' Davis.  
18"x 6' Lodge & Davis.

#### TURRET LATHES.

7"x14" Potter & J., semi-automatic.  
3"x28" Lodge & S., chucking.

27" chucking.

#### MISCELLANEOUS.

Boring mill, hor., 48" Beaman & S.  
Cold saw, 20" Newton.  
Drill presses, all sizes.  
Hammer, 300 lbs. Mossberg &  
Granville.

Hydraulic forcing press, 135 ton.  
Keyseater, No. 2 Davis.  
Planers, 20 to 24" with 6 & 8' beds, (6).  
Roll grinder, 10"x36".  
Shaper, 24" Lodge & Davis.

Large assortment of Boilermakers' and General Machinery.

Send for complete list.

## Second-Hand Wood-Working Machinery

For a large list of used wood-working machinery, consult the **Wood-Working Machinery List**, a publication similar to this but devoted to the advertising of saw-mill and wood-working machines. A copy may be had on application to the publisher, **A. H. Hitchcock, 1220-1235 Caxton Building, Chicago, Ill.**

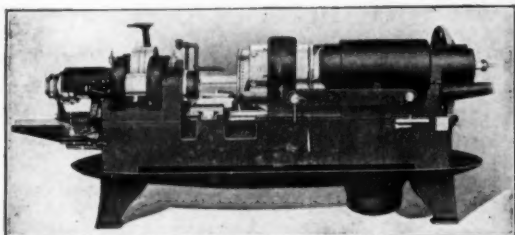
# CLEVELAND

4¼" Model "A"

# AUTOMATICS

As Good As New and  
Ready to Ship

Only Three Left



These machines are equipped with oil feed attachment which supplies oil to every turret hole, thereby permitting the use of tools in any one or all of the turret positions.

**HILL, CLARKE & CO., Inc.**  
*The Machinery Merchants*

BOSTON, MASS.  
156 Oliver St.

NEW YORK CITY  
136 Cedar St.

# New England Buyers

We ask you to try our New England Dealer Service purely as a business proposition.

We carry on our floors in Hartford the largest stock of new machine tools of reliable make between Boston and New York, as well as a good assortment of used tools in fine operating condition.

Located right in the heart of New England, we can give you a prompt personal service which you cannot secure from more distant markets.

Why not try us out on those machines you have in mind? Send the inquiries along—now, and see what we can do for you.

## Purinton & Smith

New England Dealers,

Hartford, Conn.

## For Immediate Delivery

One 12x36 Cincinnati Plain Grinder complete with two work rests, one wheel and Valve Seat Grinding attachment and self contained counter.

One 16x60 Landis Plain Grinder complete with valve seat grinding attachment and crank grinding attachment.

One 3x36 Jones & Lamson all geared head Turret Lathe with full bar equipment.

One No. 2 Warner & Swasey Hollow Hexagon Turret Lathe.

One No. 2A Warner & Swasey Hollow Hexagon Turret Lathe.

One No. 5 Becker-Brainard Vertical Milling Machine.

One No. 1½ Kearney & Trecker Vertical Milling Machines with standard equipment.

One No. 5 American Can Plain Fly Wheel Presses.

One 20-in. Foote-Burt Heavy Duty Drill Press.

**M. J. Walsh Mchy. Co.,** 141 Sycamore St., Milwaukee, Wis.



# Second-Hand Machinery

## Boring Mills.

30" Bullard Turret Mill, geared feed, chuck table.  
10" Niles vertical, two swivel heads.  
Horizontal, 4½" bar.

## Drills.

20" Prentice Bros. upright, lever feed.  
Three-spindle Sipp high speed ball bearing sensitive.  
Four-spindle Barr sensitive.

## Engine Lathes.

13"x 6' Fay & Scott, plain rest, chuck.  
14"x 6' Blaisdell, rise and fall rest.  
18"x 10' American, compound rest.  
20"x 8' Blaisdell, plain rest.  
20"x 12' American, compound rest.  
24"x 6' Plamondon back geared pulley lathe, double plain rest.  
24"x 12' Reed, compound rest, four step cone.  
36"x 8' Putnam pulley turning lathe, double plain rest.  
42"x 14' Niles.

## Milling Machines.

No. 1 U. S. Hand Miller.  
No. 2 American, plain, excellent condition.  
No. 2½ LeBlond, heavy plain, all power geared feeds.  
No. 2 Owen universal.  
No. 8 Kempamith universal, with 10" Willard dividing head.  
5" Thread Miller, Milled Screw & Machine Co.

## Planers.

24"x 24"x 6' Pond.  
30"x 30"x 10' New Haven, one head.  
60"x 60"x 12' Sellers, two heads.  
62"x 62"x 20' Sellers, one rail head, one side head.

## Turret Lathes and Screw Machines.

16" Warner & Swasey set over turret lathe, chasing attachment, stock feed, extra capacity auto. chuck, collets, good as new.  
2"x 24" Jones & L. flat turret, cone head, roller feed, excellent condition.  
1½" Gray turret lathe.  
¾" Gates hand screw machine.  
¾" Cleveland automatic.  
¾" Hartford automatic.  
1½" Hartford automatic.

## Shapers.

10" Fitchburg, traveling head.  
15" Juengst, plain crank.

## Miscellaneous.

Cold Saw, No. 12 Burke.  
Cutting-off machine, 2½" Betta.  
Foot Press, F-2 Ferracute.  
Gear cutter, spur, 18"x 4" Brainard.  
Hack Saw, Millers Falls.  
Punch, hand, No. 12 Lennox, 12" throat.

# Marshall & Huschart Machinery Co.

17 S. Jefferson St.  
Chicago, Ill

915 Chemical Building  
St. Louis, Mo.

# Desirable Tools

New No. 3 Lapointe Broaching Machine.

New 8"x18" Modern Self-contained Plain Grinder.

Slightly Used 42" Niles Vertical Boring and Turning Mill.

No. 5-A Potter & Johnston Turret Lathe, 9"x18" with back facing and oil equipment, 6½" Hole.

## Lynd-Farquhar Company

Boston, Mass.

### LATHES

20"x10' Single Step, D. B. G. Lodge & Shipley Engine Lathe.  
16"x8' Lodge & Shipley Plain Stud Lathe.

### OTHER MACHINES

24" Cincinnati upright drill with tapping attachment.  
36" Safety Wet Tool Grinder.  
36" Safety Wet Tool Grinder.  
No. 1 Diamond Bench Grinder on Pedestal.  
Dry Grinder for two 12" Wheels.  
Heald Style "C" Drill Grinder.  
Two 24" Rockford Wet Tool Grinders.  
Globe Tool Sharpener.  
Two U. S. Portable Electric Grinders, 110 volt, 2 H. P.  
U. S. Portable Electric Grinder, 110 volt, ½ H. P.  
Universal Swivel Table for Radial Drill.  
15 H. P. Gas Engine, 215 R. P. M.  
Triplex Single Acting Vertical Deane Pump, 4½" bore, 3½" stroke.  
3" Hurlbut-Rogers Cutting-off machine.  
Two Brown & Sharpe No. 3-26" Automatic Gear Cutters.  
Ingle Automatic Gear Tooth Chamfering Machine.  
Landis 10"x30" Plain Grinder with Universal Headstock.  
Peerless Belt Lacer.

### USED MOTORS

1½ H. P. Bullock, 220 volt, D. C., 600 R. P. M.  
10 H. P. Triumph, 220 volt, D. C., 200-800 R. P. M.  
Two 85 H. P., G. E. 220 volt D. C., 750 R. P. M.

**The Lodge & Shipley Mch. Tool Co.,** Cincinnati, Ohio,  
U. S. A.

# ReMANUFACTURED - (ORIGINATED BY US) - MACHINE TOOLS FOR QUICK SHIPMENT

**At Chicago—The Great Machinery Center**

## **TURRET MACHINES,—Latest Models.**

- 13—21" Gisholts, 3 1/4" hole, 2-step, 5" belt.
- 25—21" Gisholts, 3 1/2" hole, motor arrangement.

- 1—2 1/2"x26" Pratt & Whitney geared head turret.

## **ENGINE LATHES,—Latest Models.**

- 2—22"x 8" Davenport, d. b. g., turret tool post.
- 6—22"x10" Hamilton, d. b. g., c. r., semi-q. c. g.
- 2—22"x10" Hamilton, d. b. g., turret tool post, semi-q. c. g.
- 20—22"x10" Davis, d. b. g., c. r., q. c. g.
- 6—24"x10" Lodge & Shipley, selective geared head, c. r., q. c. g.
- 11—26"x10" American, d. b. g., c. r., and carriage turret, q. c. g.
- 2—26"x10" American, d. b. g., carriage turret.
- 19—26"x12" Putnam, carriage turret, semi-q. c.
- 9—26"x12" Putnam, c. r., semi-q. c.
- 2—26"x12" Wickes, d. b. g., c. r. semi-q. c. g.
- 10—28"x10" Niles-Bement-Pond, d. b. g., q. c. g.
- 4—28"x14" Lodge & S., select grd. hd., motor dr., c. r., tur. and taper.
- 3—30"x16" Lodge & Shipley, d. b. g., c. r., turret and taper.
- 7—40"x18" Pittsburgh, triple geared, q. c. g.

## **VERTICAL BORING MILLS.**

- 2—30" swing Bullard.
- 1—30" swing Baush, motor drive.
- 1—35" swing Rogers, motor drive.
- 1—36" Bullard, side head.
- 1—43" Gisholt, 2 heads.

## **MILLING MACHINES.**

- 2—No. 5 Brainard.
- 6—No. 38-B Chicago, small.
- 1—No. 4-B Becker-Brainard vert.
- 2—No. 2 Pratt & Whitney Lincoln.

## **PLANERS.**

- 1—76"x48"x18" W. & P., 3 hds.
- 1—32"x32"x 8" Gray, 2 heads.
- 1—30"x30"x10" Powell, 4 heads.
- 1—30"x30"x10" Ohio, 2 heads.
- 1—26"x26"x 7" Gray, 1 head.
- 1—26"x26"x 6" American.
- 1—24"x24"x 6" American.
- 1—24"x24"x 6" Cincinnati.
- 2—24"x24"x 5" Gray.

- 1—24"x24"x 4" Gray.
- 1—22"x22"x 6" American.
- 1—22"x22"x 6" Flather.

## **AUTOMATIC SCREW MACHINES.**

- 3—2" Gridley.
- 1—3" Cleveland.
- 1—4" Cleveland.
- 1—6" Cleveland.

## **GRINDERS.**

- 11—Thompson, cutter and tool.
- 1—Diamond, face.
- 2—4 spindle Foote-Burt, valve.
- 2—No. 14 Landis, internal.
- 1—No. 5 Bath, duplex.

## **GEAR CUTTERS.**

- 1—12" Gleason generator.
- 1—24" Fellows shaper.
- 1—No. 3-36" Cincinnati.
- 1—36" Fellows shaper.
- 1—36" Gleason spur & bevel former.

*Write for Our Green List describing these and many others*

**HILL, CLARKE & CO. OF CHICAGO**  
625 W. WASHINGTON BLVD., CHICAGO, ILL.

**"New York's Greatest Clearing-House—New York's Lowest Prices—J. J. McCabe"**

# Unusualness—

## Some of the especially desirable

## Tools in McCabe's stock right now

120

### 42" Planer

Double Web Housings. Putnam Machine Co.'s 42" wide, 42" high table 10' in length inside pockets—with 2 heads on crossrail, having usual automatic feeds, C-shaft and full equipment. In thoroughly good condition ready for immediate service.

### 36" Planer

Heavy Double Web Housings. Flather Co.'s Planes, 36" wide, high, table 8' in length inside pockets, with 2 heads on crossrail, C-shaft and full equipment. In thoroughly good condition, ready for immediate service.

### Planer Type Milling Machine

Heavy Double Web Housings (Adjustable). Becker-Brainard, 52" wide, 26" high, table 11' long inside pockets, with horizontal spindle. Arranged for motor drive (no motor). In thoroughly good condition.

### Vertical Milling Machine

No. 3 Becker-Brainard, in thoroughly good condition.

### Universal Grinder

Landis Co.'s capacity 12"x66"; complete. In thoroughly good condition.

### Drop Hammer

900 lbs. with belt lifter, Williams & W.

### Slotter

10" stroke, New Haven.

### Slotter & Keyseater

30" stroke, Baker Bros.

### Gear Shaper

36" capacity, Fellows.

### Double End Cutting-Off Mch.

10" Bement-Miles.

### No. 2 Keyseater

Baker Bros.

Landis Co., capacity 12" x 66"; complete. In thoroughly good condition.

NO. 2 Keyseater  
Baker Bros.

### 34" Planer

Heavy Double Web Housings, Pond Co.'s Planes 34" wide, 34" high and 9' in length, with three heads—two on rail and one on housing, C-shaft and regular equipment. In thoroughly good condition.

### 26" Planer

Heavy Double Web Housings, Pond Co.'s Planes 26" wide, 26" high and 8' in length, with two heads on cross-rail, C-shaft and regular equipment. In thoroughly good condition.

### 24" Planer

Heavy Double Web Housings, American Tool Works Planes 24" wide, 24" high, table 6' in length inside pockets, with one head on cross-rail, C-shaft and full equipment. In thoroughly good condition ready for immediate service.

### Planer Type Milling Machine

Heavy Double Web Housings, Bement-Miles, 24" wide, 24" high, table 8' in length inside pockets. With horizontal spindle, C-shaft and full regular equipment. In thoroughly good condition.

### Large Lathes

60" Swing, 12' Bed, Putnam.  
48" Swings, 20' Bed, Putnam.  
36" Swings, 20' Bed, Putnam.  
48" Swing, Double Head Pulley.

### Large Turret Lathe.

40" Swing, American, weighing about 22,500 lbs. Hollow spindle, 3 3/4" hole for handling work up to 6' 9" between chuck and turret. Main turret, 5 tools. Supplementary turret, 4 tools.

### Five New Radial Drills

2 1/2' Arm, latest heavy pattern, speed box style, with back gears direct on spindle, full automatic feeds, complete. Improved construction.

### OTHER TOOLS

#### Planers

36" x 6' Pond, 1 head.  
36" x 8' Whitcomb, 1 head.  
36" x 12' Niles, 2 heads.

#### Lathes

16" swing to 60" with beds of various lengths.

#### Steam Hammer

2,500 lbs. agl. frame, Bement-Miles.

### Flat Turret Lathe

2x24" Jones & Lamson.

### Automatic Turret Lathe

20" swing, Potter & Johnston.

### Turret Lathe

21" swing, Gisholt.

### Boring Mill

36" swing, turret head, Brown & S.

### New Lathes

High duty 3-Step Cone, Double Bk. Gears, with all steel Quick-change.

A number of each of the following sizes:

16" Swing, 6' bed, Quick-change.  
16" Swing, 8' bed, Quick-change.  
16" Swings, 8' bed, Quick-change.  
18" Swing, 10' bed, Quick-change.  
18" Swings, 12' bed, Quick-change.  
21" Swing, 10' bed, Quick-change.  
21" Swings, 12' bed, Quick-change.  
24" Sw., 10' bed, Semi-qk. Change.  
24" Sw., 12' bed, Semi-qk. Change.  
24" Sw., 14' bed, Semi-qk. Change.  
24" Sw., 16' bed, Semi-qk. Change.  
24" Sw., 18' bed, Semi-qk. Change.  
26" Swings, 12' bed, Quick-change.  
26" Swings, 14' bed, Quick-change.  
26" Swings, 16' bed, Quick-change.  
26-48" Swings, 12' Bed, "McCABE" DOUBLE SPINDLE.  
Also 16 and 22' Beds in stock.

**J. J. McCABE**

149 Broadway

NEW YORK CITY

# Immediate Delivery

## Bending and Straightening Rolls

- 1—Set **Bertch** No. 8 Straightening Rolls, 72" between housings, 7 rolls, motor driven. Condition equal to new.
- 1—Set **Niles** Bending Rolls, pyramid type, drop end, 10' between housings, geared, belt driven, A-1.

## Punches and Shears

- 1—48" **Power Squaring Shears**, cap.  $\frac{1}{2}$ " plate, geared, belt driven, steel plate construction, A-1.
- 1—**Hans Kraut Mfg. Co.** Single Stroke I-Beam Shear, cap. 12" beams, 15" channels. A-1.
- 3—**L. & A.** Single End Punches and Shears, 9" throat, cap. 1" thru 1", geared, belt driven. First class.

## Machine Tools

- 1—**Espen-Lucas** 2-spindle Boring and Drilling Machine, 6" bars.
- 1—**Baker** Combination Draw Stroke Slotter and Keyseater, 30", arranged for motor drive.
- 1—36" **Morton** Draw Cut Shaper with vise, arranged for motor drive.
- 1—26" **Hendey** Friction Geared Shaper with vise and c/s.
- 1—14" **P. & W.** Crank Shaper, with vise and c/s.
- 1—24"x24"x5' **Pond** Planer, single head.
- 1—**Bement** 36" Car Wheel Borer with crane and chuck jaws.
- 1—20"x72" No. 5 **B. & S.** Universal Grinder.
- 1—1" to 4" Automatic **Worm Milling Machine**.
- 1—20"x17" **J. & L.** Engine Lathe, c. r., 13' centers, hollow spindle, belt driven, full equipment, A-1.
- 1—24"x14', 9' centers, **Schumacher & Boye** Engine Lathe, belt driven, q. c. g., taper attachment used 30 days. Equal to new.
- 1—4 $\frac{1}{2}$ "x30" **Bardons & Oliver** Heavy Turret Lathe: geared head, motor driven, automatic chuck, bar feed. Equal to new.
- 1—No. 2 **Eureka** Metal Sawing Machine.
- 1—**Warner & Swasey** Automatic Cock Grinder, equal to new.

## Cranes, Air Compressors, Hydraulic Equipment

- 1—**Clayton** Duplex Steam-Driven Air Compressor, 400' at 100 lbs.
- 1—**Snow** Duplex Steam-Driven High Pressure Pump, size 16"x2 $\frac{3}{4}$ "x12", up to 1800 lb. pressure.
- 2—**Reading** 5-ton Geared Single I-Beam Hand Traveling Cranes, 18' span, complete with 5-ton **Yale & Towne** Triplex Hoist.
- 3—5-ton **W. H. Wood** Hydraulic Jib Cranes, 38' radius, 7' lift.
- 1—**W. H. Wood** Hydraulic Hoist or Traveling Crane, 40' lift, cap. 8 tons.

## D. M. Osborne Machinery Co.

American Trust Bldg., Cleveland, Ohio

Warehouse: West 9th & Front Sts.

# Late Type Machine Tools

Secured through purchase of plant in business only ten months.

Every one guaranteed. Offered subject prior sale.

## MILLING MACHINES

- |                               |                                     |
|-------------------------------|-------------------------------------|
| 1—No. 1½ Milwaukee Universal. | 1—No. 3 Becker Vertical.            |
| 1—No. 25 Becker Plain.        | 1—No. 0 Bickett Miller and Profiler |

## SHAPERS

- |                                |                                |
|--------------------------------|--------------------------------|
| 1—24" Cincinnati, B. G. Crank. | 2—15" Potter & Johnston Plain. |
|--------------------------------|--------------------------------|

## LATHES

- |  |  |
|--|--|
| 1—18x8 Davis Engine Lathe, taper attachment. | 1—14x6 Cisco Q. C. G., Engine Lathe, taper attachment. |
| 2—16x7 Oliver Q. C. G., Engine Lathes.       | 1—11x4 Barnes, Screw-Cutting Lathe.                    |
| 1—12x5 Champion Engine Lathe.                | 1—9" Stark No. 4 Precision Lathe.                      |

## DRILLS AND BORING MILLS

- |  |
|--|
| 1—No. 1 Cleveland Horiz. Boring, Drilling and Milling Machine. |
| 1—22" Barnes S. H. Drill Press, B. G., P. F.                   |
| 1—20" Champion Drill Press, B. G., P. F.                       |
| 1—20" Silver Drill Press, W. & L. feed.                        |
| 1—14" United States Sensitive Drill.                           |
| 1—16" C. & O. Sensitive Drill.                                 |

## MISCELLANEOUS

- |  |   |
|--|---|
| 1—Woods Universal Tool Grinder.        | 1—Lehman Rotary Pressure Bl'er.                                   |
| 1—6x6" Peerless H. Sp. Hack Saw.       | 1—500 lb. Nichols Floor Crane.                                    |
| 1—No. 9 Greenerd Arbor Press.          | 1—24x36" B. & S. Surface Plate.                                   |
| 1—No. 3½ Greenerd Arbor Press.         | 1—5 H. P. Fairbanks-Morse A. C. Motor.                            |
| 1—No. 10 Sterling Wet Tool Gdr.        | 1—10 H. P. Peerless A. C. Motor.                                  |
| 1—No. 2AA Hoover "Ever-ready" Furnace. | 1—15 H. P. Wagner A. C. Motor.                                    |
| 1—No. 4 Belleville Furnace.            | 9—Swivel Machinists' Vises.                                       |
| 1—100-lb. Standard No. 1 Belt Hammer.  | 1—Large lot cutters, tools, clamps, chucks, leather belting, etc. |

Also have the following, rebuilt and in first-class condition:

## LATHES

- |                                |                                  |
|--------------------------------|----------------------------------|
| 18x8 Pratt & Whitney, Engine.  | 14" Drees Univ. Turret Lathe.    |
| 16x8 Greaves-Klussman, Engine. | 15" American No. 1 Brass Lathe.  |
| 14x6 Flather Engine Lathe.     | 6" Bleser No. 3 Precision Lathe. |

## PLANERS

- |                        |                           |
|------------------------|---------------------------|
| 24x24x5 Powell Planer. | 18x18x4 Fitchburg Planer. |
|------------------------|---------------------------|

## DRILLS

- |                             |                                  |
|-----------------------------|----------------------------------|
| 10" Barnes Friction, (5).   | Fox 4-Spindle.                   |
| 22" Pratt & Whitney.        | Cordon & Son 4-Spindle.          |
| F. Reed & Co. 3-spindle.    | Dwight-Slate Co. 6-Spindle.      |
| Dwight-Slate Co. 4-Spindle. | Foote-Burt Co. 4-Sp. adjustable. |

## MISCELLANEOUS

- |   |                                  |
|---|----------------------------------|
| 16x32" Landis No. 2-A Universal Grinder.  | Wood Light & Co. Lincoln Miller. |
| Gisholt Universal Tool Grinder.           | No. 2 Robertson Hack Saw.        |
| Auto. Machine Co. Universal Tool Grinder. | ¾" Shuster Riveter.              |
|   | 16" Hendey Geared Shaper.        |
|   | 30" P. S. & W. Foot Power Shear. |

Seven hundred machines in stock, including machinery for every need.

**Wayne Machinery Company**  
Fort Wayne, Ind.

A well known manufacturing company offers for sale the following described lathes, guaranteed to be in first-class second-hand condition. Immediate shipment.

1-48" "Sellers" Heavy Triple Back Geared Screw Cutting Engine Lathe, having 20' bed, maximum swing 49", swing over carriage 40", 13' between centers, complete with countershaft.

1-24" Raised to 28" "Gleason" Double Back Geared Screw Cutting Engine Lathe, power cross and horizontal feed, bronze bearings for main spindle, 12' bed, 7' centers, swing over shears 32", swing over carriage 22", complete with countershaft.

Address: Department S, Box 900, Birmingham, Ala.

## Greeting Cards

OUR SAMPLES of Christmas Greeting Cards (Personal or Business) showing a large assortment, will be mailed to you direct for your inspection. Place your order now for delivery later. This is the sure plan, to postpone may leave you without cards as it did a great many last season. Prices will also advance as the season advances.

**The American Embossing Co.,**  
192-96 Seneca St., Buffalo, N. Y.



# Ready to "Do Their Bit"

## CRANES

15-ton Alfred Box & Co. Traveling Crane, sgl. motor, 15 h.p., 220 v., 40' span.

## Vertical Boring Mills

48" Colburn, 2 swivel heads.

2-42" Colburn, 1 swivel head.

## Planers

40"x40"x14' New Haven, single head.

30"x30"x12' Cincinnati, 2 heads.

Two (2) 30"x30"x12' Harrington, 2 heads.

30"x30"x12' Pratt & Whitney, single head.

24"x24"x6' Sellers, single head.

## Radial Drills

60" Hamilton Plain Radial.

60" Drees Universal, motor driven.

60" Niles Plain.

48" Cincinnati Plain.

48" Gang, with tapping attachment.

## Grinders

No. 54 Bath Duplex.

No. 3 Bath Universal.

12"x60" Landis Universal.

No. 2 Bath Universal.

10"x30" Atlas Universal.

Two (2) No. 24 Bath Duplex, Internal.

No. 11 Landis Plain.

## Milling Machines

Two (2) Newton Vertical Milling Machines.

No. 5 Brown & Sharpe vertical.

No. 14 Cincinnati Universal, dividing heads.

No. 2 Putnam Universal, dividing heads.

No. 24 Garvin Universal, dividing heads.

No. 2 LeBlond Plain.

## Presses

No. 54 Garrison Straight Sided Single Crank Press, weight 26,000 lbs.; 5" stroke, 25" between housings.

No. 93-A Toledo, weight 14,000 lbs.

No. 92-B Toledo, weight 9,400 lbs.

No. 35 Arch Press, weight 5,000 lbs.

## Power Hammers

1000 lb. Pratt & Whitney, brd. drop.

1000 lb. Billings & Spencer, board drop.

800 lb. Lane, double frame, Steam.

500 lb. Bell, single frame, Steam.

500 lb. Bradley upright, belt.

200 lb. Beaudry upright, belt.

200 lb. Bradley upright, belt.

40 lb. Bradley, helve.

Two (2) No. 4 Nasel, pneumatic.

## Pipe Machines

12" Bignall & Keeler.

## Shapers

30" Morton, draw cut.

24" Morton, draw cut.

24" Juengst.

24" Hendey.

16" Smith & Mills.

12" Hendey.

24"x5' Bement, traveling head, powerfully back geared.

## Lathes

Seven (7) Fay Automatics, good as new.

Three (3) Jones & Lamson 2-spindle Flat Turrets, very modern.

Six (6) 40"x18' Pittsburgh Engine Lathes, back geared, face plate drive, quick change gears.

## Miscellaneous

10' Hilles & Jones Boiler Plate Rolls.

*Our stock is added to daily. Write for latest Stock List.*

## Graves Machinery Exchange

Offices:

50 Church St., New York City

Phone: Cortlandt 665

Warehouse and R. R. Siding:

Johnson & Monitor Sts.,

Jersey City, N. J.

## Write To Baird For Quick Delivery On Good Tools

---

- 3—No. 2 Wilmarth & Morman Surface Grinders.
- 3—No. 1 Wilmarth & Morman Universal Grinders.
- 1—6"x18" Landis Plain Grinder.
- 1—No. 70 Heald Internal Grinder.
- 4—6"x14" Pratt & Whitney Thread Millers.
- 1—No. 1½ Cincinnati Universal Miller.
- 1—60" Bickford Vertical Boring Mill.
- 1—10' Niles Vertical Boring Mill.
- 1—36" Niles Horizontal Boring Mill.
- 1—3¼"x40" Greenlee Flat Turret Lathe.
- 1—31"x31"x8' Whitcomb Planer.
- 1—No. 5 Fox 16 Spindle Drill.

*Prices and Description cheerfully  
given upon request.*

---

**W. J. Baird Machinery Co.**

54-56 Jefferson Ave.,

Detroit, Mich.

# Riverside Machinery List

**We Own Every Tool Offered**

## New Machine Tools For Immediate Shipment

- |   |  |
|---|--|
| 18"x 8' Springfield standard lathes.      | No. 19 Bliss o. b. i. press.               |
| 16"x 8' Springfield q. c. g. lathes.      | No. 18C Bliss o. b. i. press.              |
| 16"x 6' Springfield q. c. g. lathes, (2). | No. 18 Bliss o. b. i. press.               |
| 16" Springfield b. g. shapers, (2).       | 20" Buffalo b.g., p.f. drill presses, (3). |
| 20" Springfield b. g. shapers, (2).       | 20" C.-Otto b.g., p.f. drill presses, (2). |
| 25" Springfield b. g. shaper.             | 20" Champ. b.g. p.f. drill presses, (2).   |
| 14" Pierce turret lathes, (3).            | 20" Champion pl. drill presses, (2).       |
| 1x8 Pierce hand screw machines, (2).      | 20" Silver plain drill presses, (3).       |
| No. 1 1/2 American milling mchs. (3).     | 20" C.-Otto plain drill presses, (3).      |
| No. 20 Bliss o. b. i. press.              | 14" Champion pl. drill presses, (2).       |

## USED MACHINERY

### ENGINE LATHES

- |                                |                               |
|--------------------------------|-------------------------------|
| 22"x14' Putnam standard.       | 14"x 6' Prentiss standard.    |
| 16"x 8' Porter standard.       | 14"x 6' Sebastian standard.   |
| 16"x 8' Reed stud lathes, (2). | 13"x 8' Barnes standard, (2). |
| 14"x 8' Sebastian standard.    | 13"x 5' Barnes standard, (2). |
| 14"x 6' Springfield standard.  | 10"x 4' Sebastian, standard.  |

### TURRET AND SCREW MACHINES

- |   |  |
|---|--|
| No. 6-A Potter & J. auto. (2).            | 12" Warney & Swasey tur. lathes, air chucks, (4).        |
| 4 1/2" Gridley auto. scr. mch., motor dr. | 2" Cleveland automatic screw machines, jigger feed, (2). |
| No. 4 Foster f.g.h. hd. scr. mchs., (2).  | 4 1/2" Cleveland auto. screw machine.                    |
| No. 5 Pierson f. g. h. hd. scr. mche.     |  |
| 16" Warner & S. turret lathes, (4).       |  |

### MILLING MACHINES AND GRINDERS

- |  |                                   |
|--|-----------------------------------|
| No. 4 LeBlond plain milling mche.                    | Fox hand milling machines, (3).   |
| No. 2 Hendey pl. milling machine.                    | Garvin hand miller.               |
| No. 0 B. & S. pl. milling machine.                   | No. 2 1/2 Bath universal grinder. |
| No. 1 Cincinnati pl. milling mche.                   | No. 12 Modern plain grinder.      |
| No. 13 Pratt & W. Lincoln type millers, (2).         | No. 14 Modern plain grinder.      |
| No. 1 1/2 Knight milling and drilling machines, (5). | No. 1 Landis internal grinder.    |
|  | No. 2 W. & M. surface grinder.    |
|  | No. 3 W. & M. surface grinder.    |

### DRILL PRESSES

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 5' Mueller plain radial, old type.   | 6 spindle Fox high speed drills, (4). |
| 31" Barnes b. g., p. f. drill press. | 4 spindle Fox high speed drills, (2). |
| 3 sp. Henry & Wright high speed.     | 16 spindle Natco drill.               |

### SHAPERS AND PLANERS

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 16" Hendey geared shaper.           | 27"x27"x8' Cincinnati planer, s. h. |
| 36"x36"x10' New Haven planer, s. h. | 16"x16"x5' Hendey planer, s. h.     |

### PRESSES AND HAMMERS

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| Waterbury-F. o. b. i. press, geared. | 800 lb. B. & S. roll board hammer. |
| No. 10 Perkins drawing press.        | 800 lb. F. & W. roll board hammer. |
| No. 2-W Bliss wiring presses, (3).   | 150 lb. Bradley strap hammer.      |

### AIR COMPRESSORS

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| 9x11 Chicago Pneumatic, belt dr.   | 8x 8 Union Steam Pump, belt dr.   |
| 8x 8 Fairbanks Morse, belt driven. | 8x 6 Westinghouse, steam driven.  |
| 8x 8 Gardner, single belt driven.  | 6x 6 Ingersoll Rand, belt driven. |

**We also carry a large assortment of Steam Engines  
Steam Pumps and Electrical Equipment of all kinds.**

We are in the market to purchase machine tools, both large and small.

**Riverside Mchy. Depot, 17 St. Aubin Ave., Detroit, Mich.**

One 2"x20" Pratt & Whitney Turret Lathe, w. f., b. g., friction hd.  
 Two Pratt & Whitney Plain Cylindrical Grinders, capacity 6"x48",  
 in excellent condition.  
 One Springfield Machine Tool Co. Cylindrical Grinder, cap. 12"x96".  
 One Brown & Sharpe Universal Grinder, capacity 12"x40".  
 One 8"x18" Modern Plain Grinder, new.  
 Two 6"x30" Modern Plain Grinders.  
 One Diamond Machine Co. Roll Grinder, capacity 8"x20".  
 One No. 1½ Becker Universal Milling Machine, excellent condition.  
 One No. 22 Brainard Plain Milling Machine, back geared, 52"x14"  
 table, three slots, condition good.  
 One No. 3 Cincinnati Plain Milling Machine.  
 One No. 2 B. & S. plain horiz. Milling Machine, excellent condition.  
 One 24" Wm. E. Gang Radial plain Drill, cone driven, excellent cond.  
 One 26"x7" Niles Planer, parallel drive, one head.  
 One Wheeler Planer, 24"x24"x6', in excellent condition, one head.  
 One Whitcomb Crank Planer, used less than two years, excellent.  
 One 24"x6" Whitcomb Planer, one head, new.  
 One Flather Gear Cutter, for spur gears only, capacity 8"x26".  
 One 24" Cleveland auto. Screw Mche., sgl. pulley, condition good.  
 We also carry a large line of Shapers, Turret Lathes, Hand Screw  
 Machines, Engine Lathes, Upright Drills, etc.

*Send us your inquiries*

**Factory & Mill Supply Co.**  
 137 Oliver St., Boston, Mass.

## **New Boston Show Rooms** **W. H. J. Fitzgerald & Co.**

30 Oliver St., Boston

### **FOR SALE**

#### **Two No. 56, 2¼" National Acme Multiple Spindle Automatic Screw Machines**

Single Belt drive complete. Used less than six months. Large  
 assortment extra attachments and parts.

#### **Six ¼ Inch Automatic Screw Machines (Stehli Patent)**

Each fitted with screw slotting attachment.  
 Manufactured by Hartford Machine Screw Company.  
 These machines adapted to the rapid production of all kinds  
 of small screws, bushings, studs, etc. Condition: good as new.

#### **Two Model F Baker High Speed Drills**

In guaranteed first class condition.

# Tucker's Safety First

## Oil Hole Covers

Require but one hand to pump in the oil. Adapted to all kinds of mechanism having oil holes leading to a bearing, and locate the parts to be lubricated.

*Send for Catalogue  
Oil Hole Covers No. 5*



Style G, Closed



Style G, Open

Style E



Style C



Style F, Drive



Style A



Style D, Open



Style D, Closed



Rotary Head

**W.C. & F.C. TUCKER, Hartford, Conn.**

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## **"New Britain" Stacking Tote Boxes**



**Electrically welded—no rivets.**

They stack easily and snugly, without buckling or sagging under heavy loads, and can be trucked in absolute safety over uneven floors.

Two half-round runners, which are spot-welded to the bottom, present the least friction in dragging and save wear.

Their stiff and durable construction is greatly augmented by the double-fold handles, the sides overlapping the ends, the  $\frac{3}{4}$ -in. selvaige around the edge, and the bottom runners.

*Free Bulletin 1224-B explains fully*

**The New Britain Machine Company**

**"Shop Furniture  
Originators"**



**New Britain,  
Conn. U.S.A.**



